FIG. 1

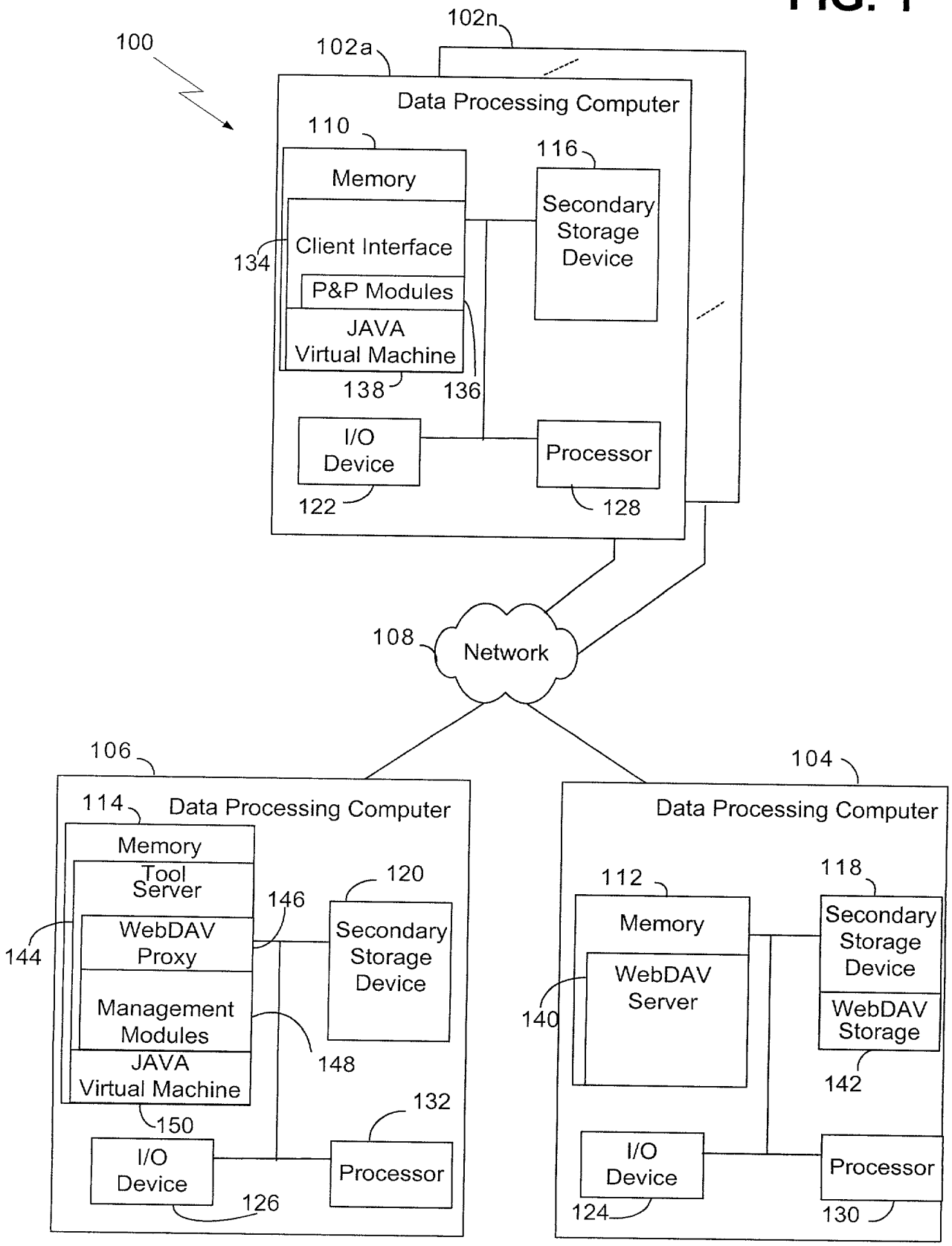

100
102n
102a
Data Processing Computer
110
Memory
116
Secondary Storage Device
134
Client Interface
P&P Modules
JAVA Virtual Machine
138
136
I/O Device
122
Processor
128
108
Network
106
114
Data Processing Computer
Memory
Tool Server
120
146
144
WebDAV Proxy
Secondary Storage Device
Management Modules
148
JAVA Virtual Machine
150
132
I/O Device
Processor
126
104
Data Processing Computer
112
118
Memory
Secondary Storage Device
WebDAV Server
140
WebDAV Storage
142
I/O Device
Processor
124
130

FIG. 2

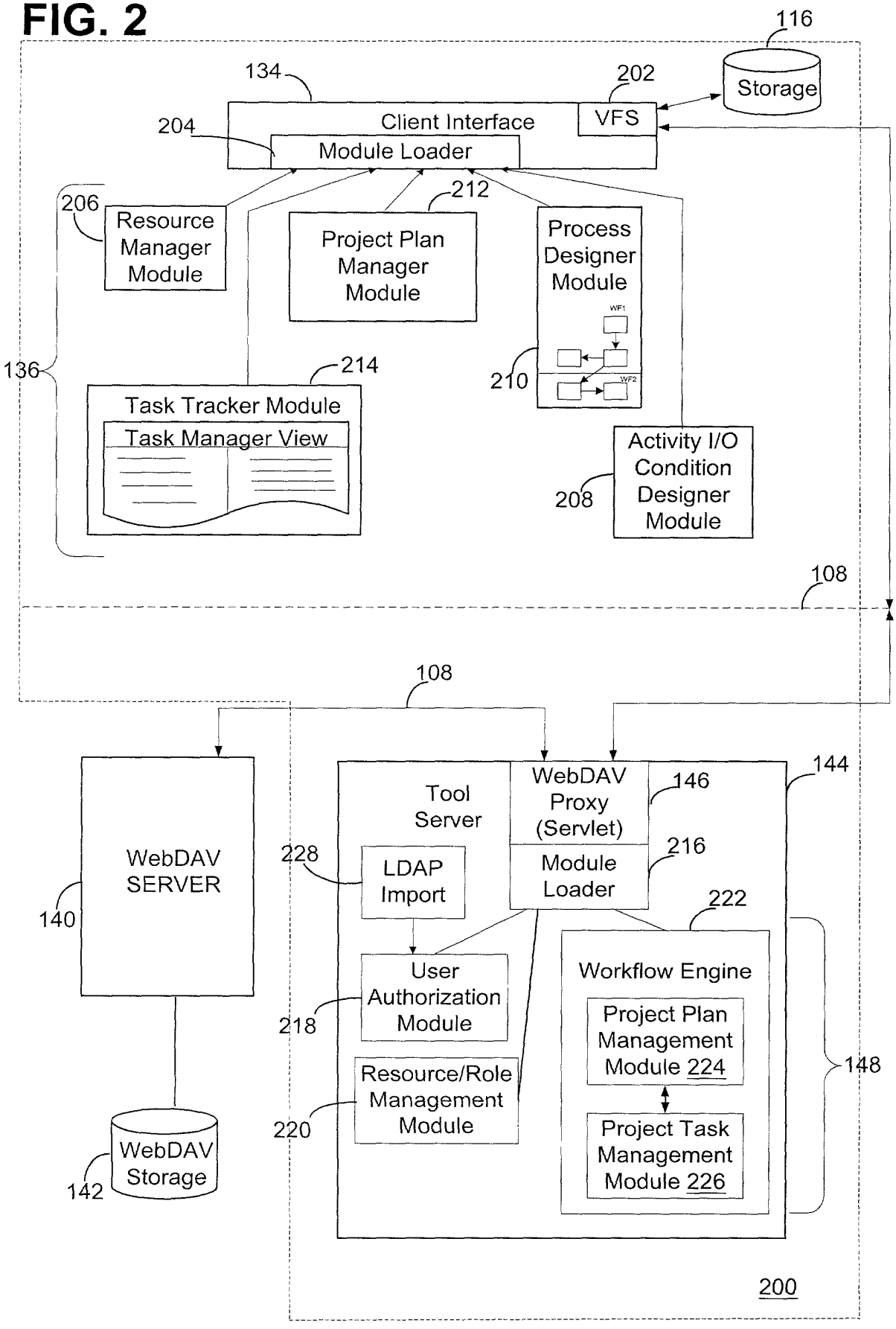

116
Storage
134
202
Client Interface
VFS
204
Module Loader
206
212
Resource Manager Module
Project Plan Manager Module
Process Designer Module
WF1
WF2
136
214
210
Task Tracker Module
Task Manager View
Activity I/O Condition Designer Module
208
108
108
144
WebDAV SERVER
140
Tool Server
WebDAV Proxy (Servlet)
146
228
LDAP Import
Module Loader
216
222
User Authorization Module
218
Workflow Engine
Project Plan Management Module 224
Resource/Role Management Module
220
148
Project Task Management Module 226
WebDAV Storage
142
200

FIG. 3

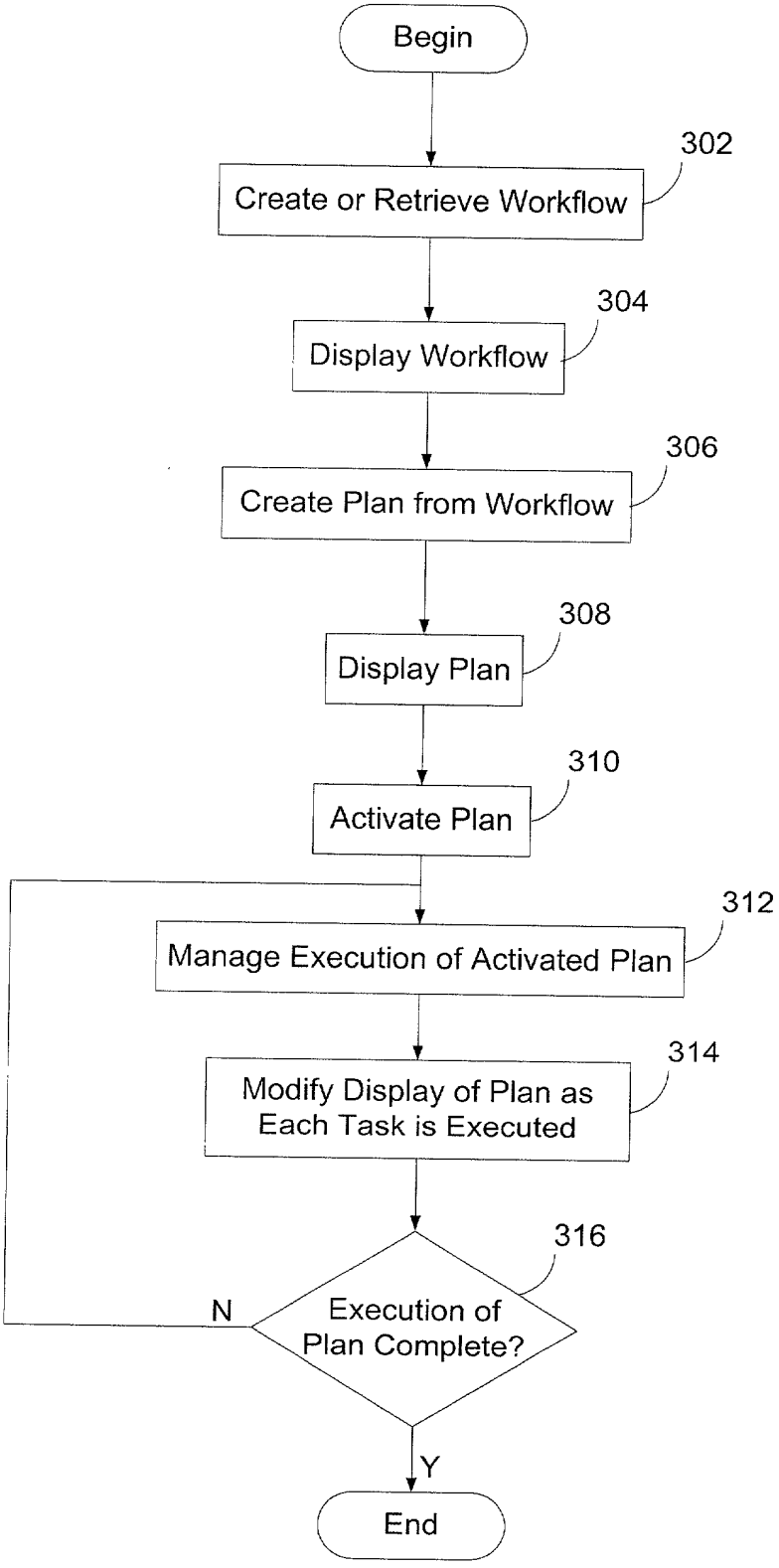

Begin
302
Create or Retrieve Workflow
304
Display Workflow
306
Create Plan from Workflow
308
Display Plan
310
Activate Plan
312
Manage Execution of Activated Plan
314
Modify Display of Plan as Each Task is Executed
316
Execution of Plan Complete?
N
Y
End

FIG. 4

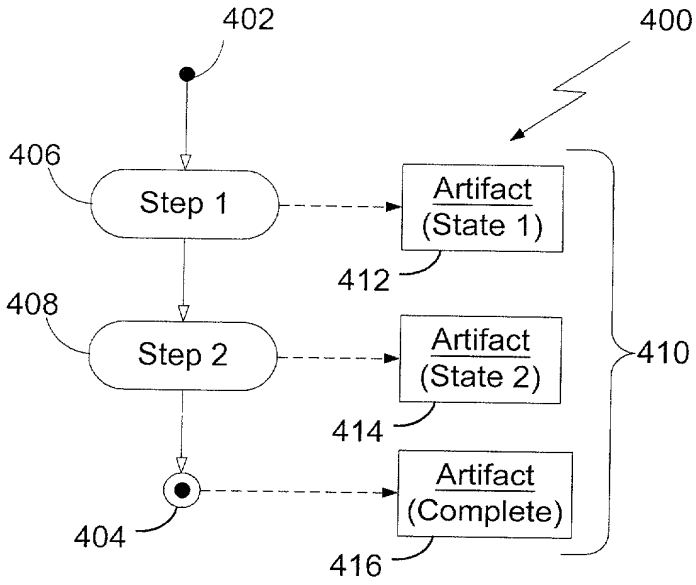

402
400
406
Step 1
Artifact
(State 1)
412
408
Step 2
Artifact
(State 2)
410
414
Artifact
(Complete)
404
416

FIG. 5

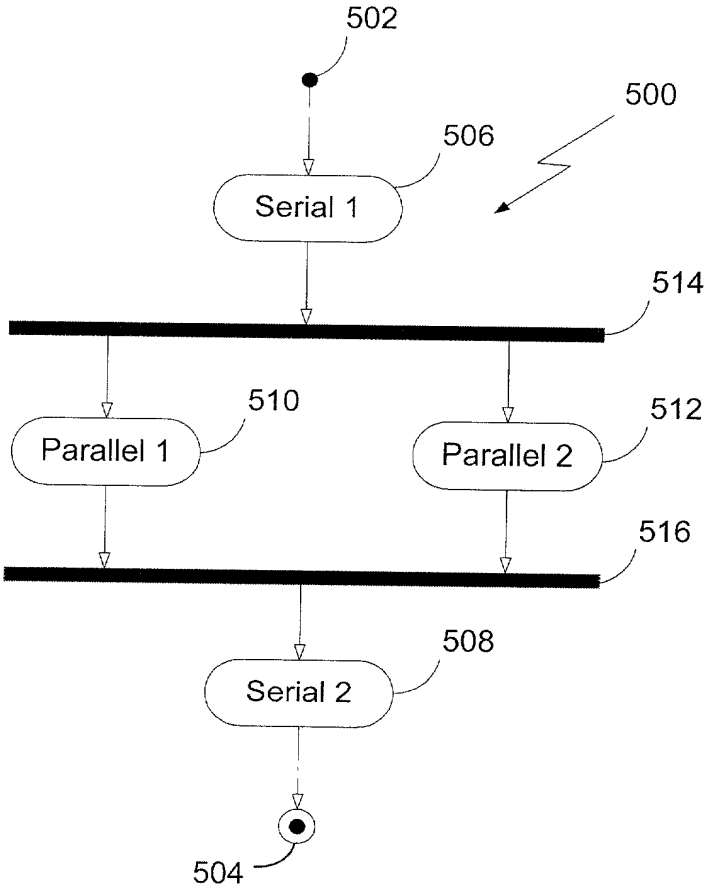

502
500
506
Serial 1
514
510
Parallel 1
512
Parallel 2
516
508
Serial 2
504

FIG. 6

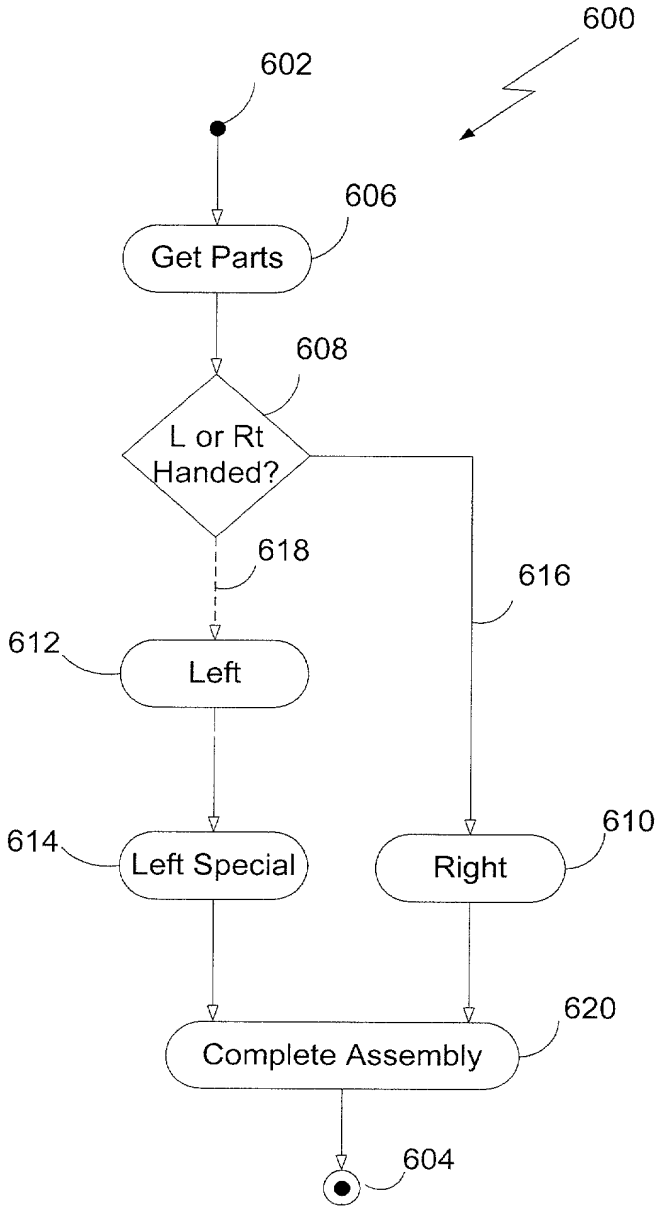

600
602
606
Get Parts
608
L or Rt Handed?
618
616
612
Left
614
Left Special
Right
610
620
Complete Assembly
604

FIG. 7

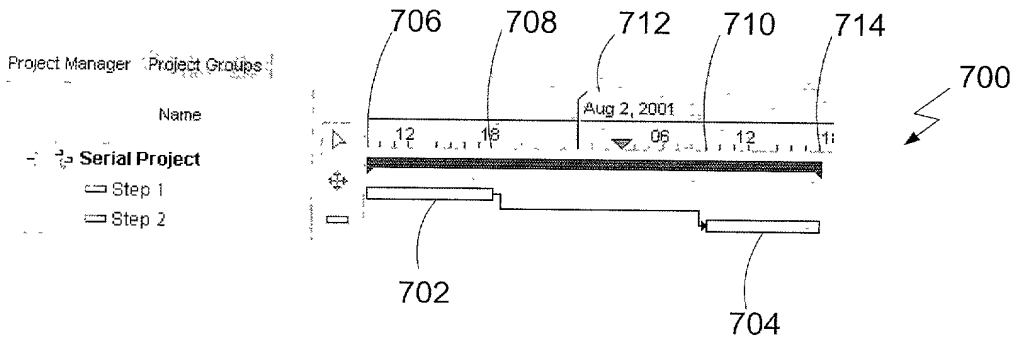


FIG. 8

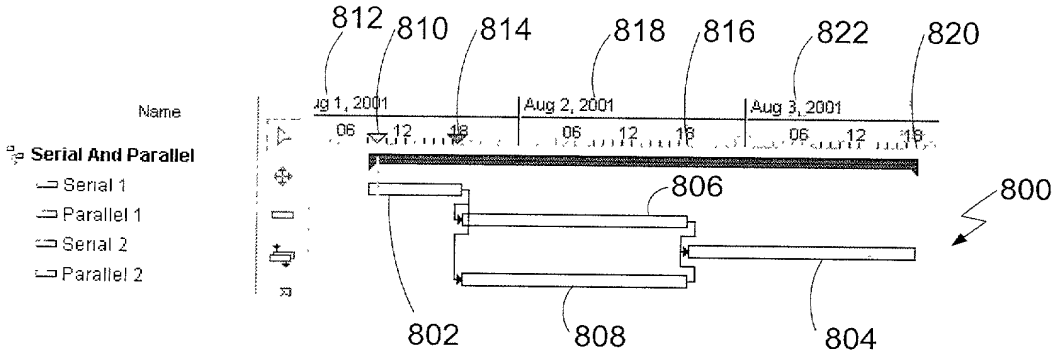


FIG. 9

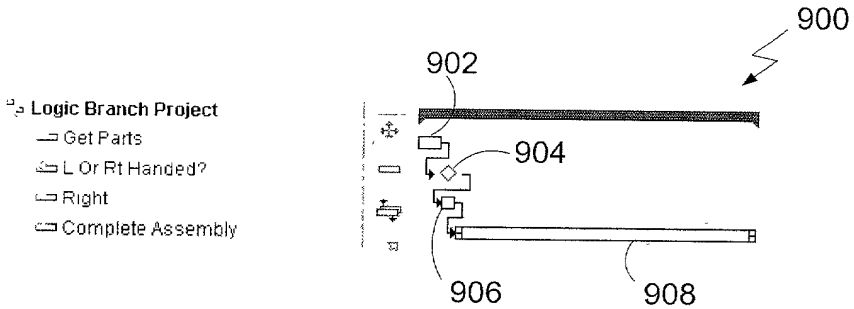


FIG. 10

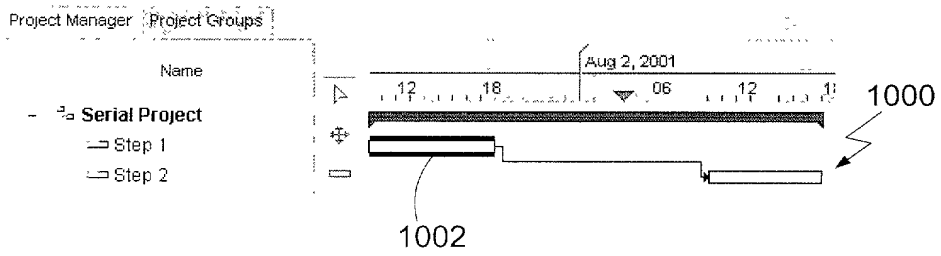


FIG. 11

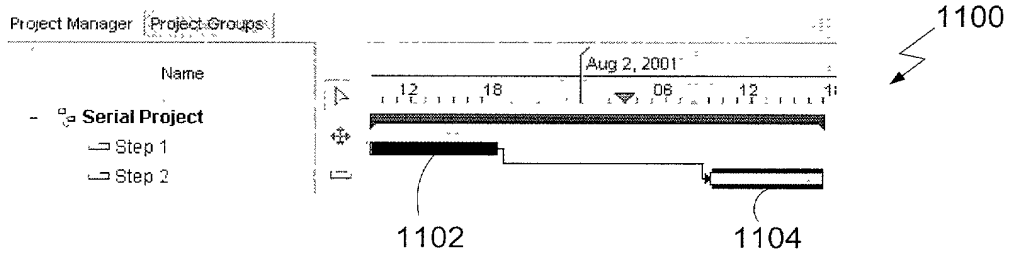


FIG. 12

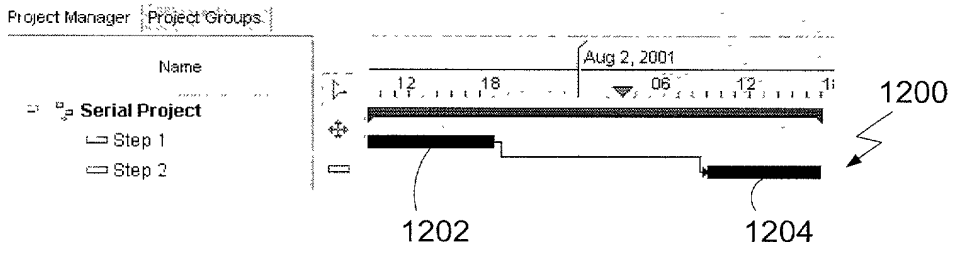


FIG. 13

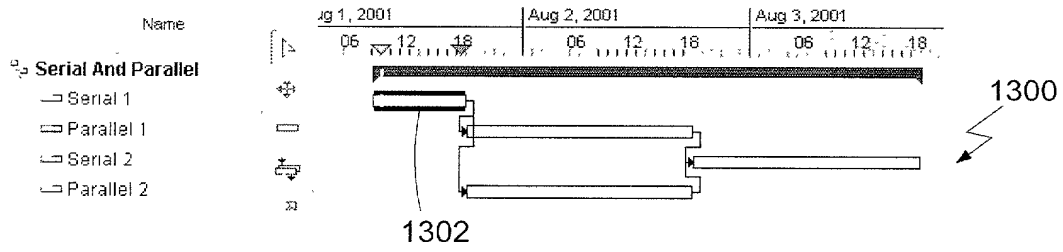


FIG. 14

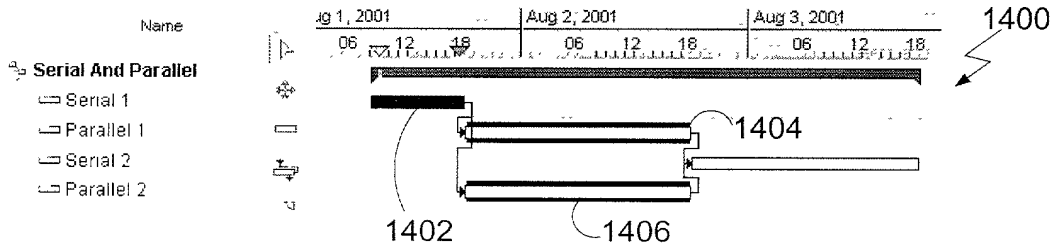


FIG. 15

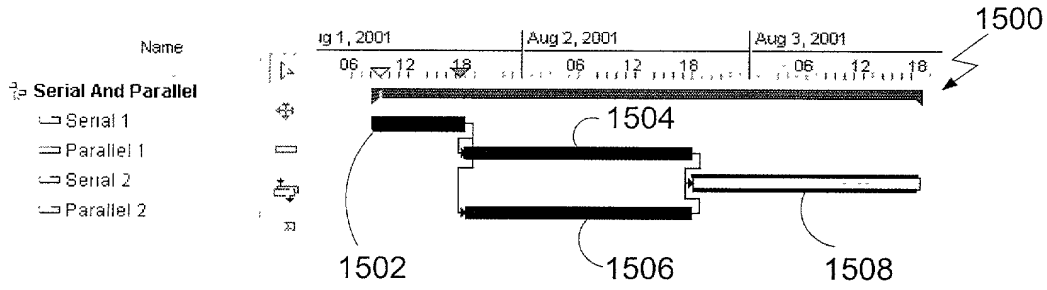


FIG. 16

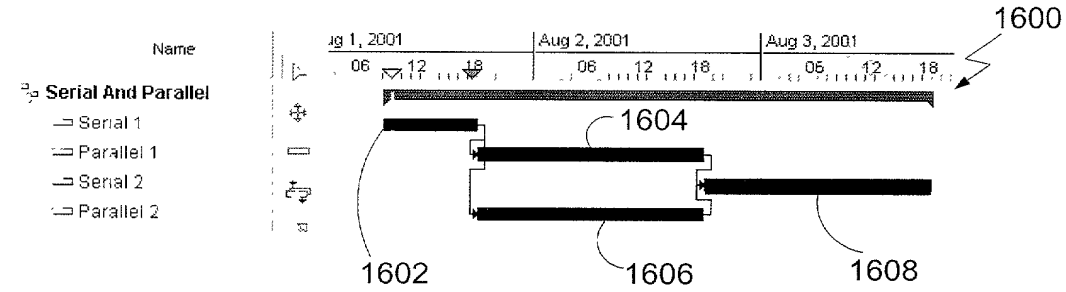


FIG. 17

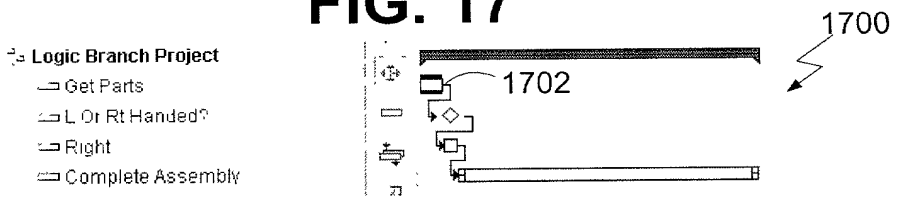


FIG. 18

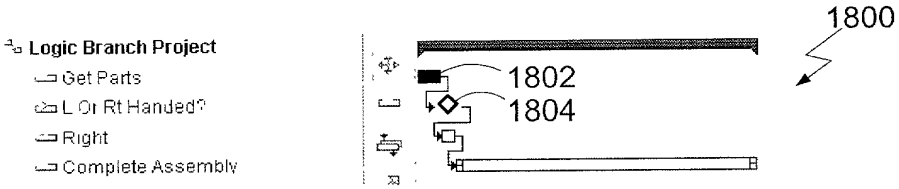


FIG. 19

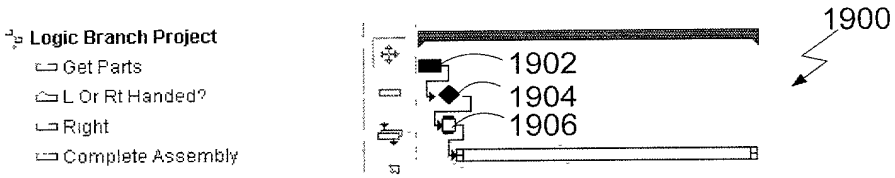


FIG. 20

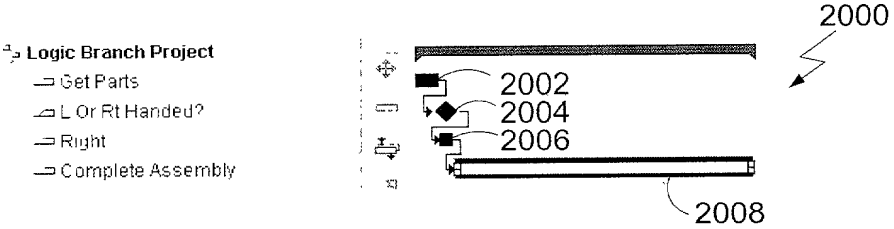


FIG. 21

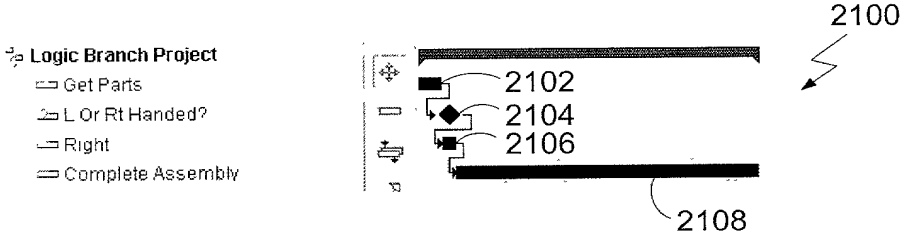


FIG. 22

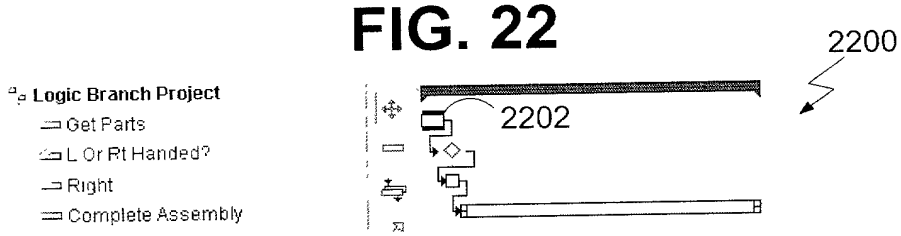


FIG. 23

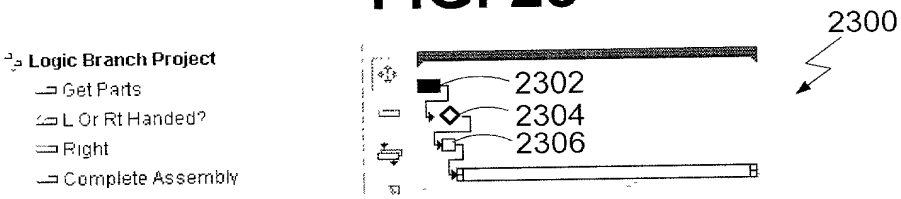


FIG. 24

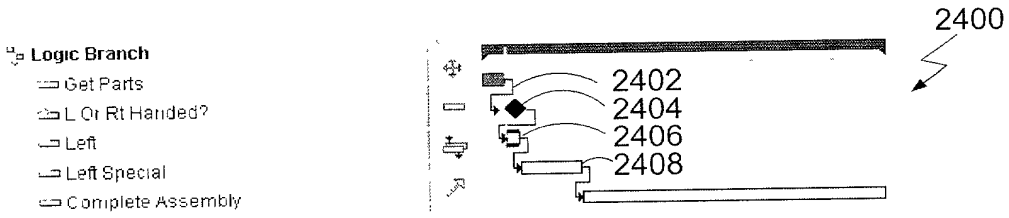


FIG. 25

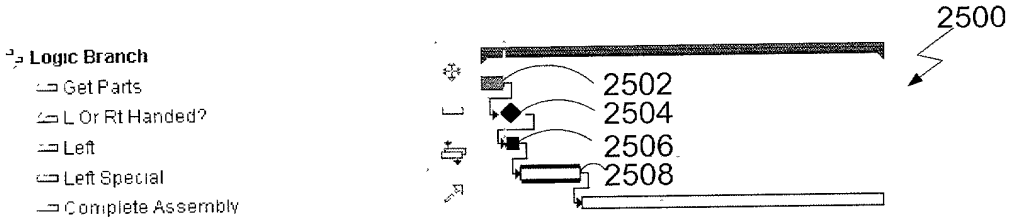


FIG. 26

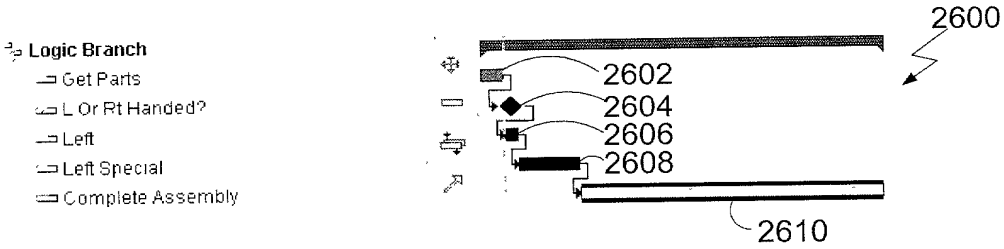


FIG. 27

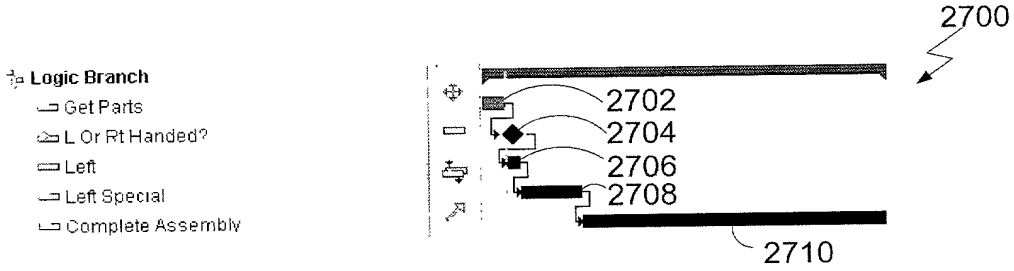


FIG. 28A

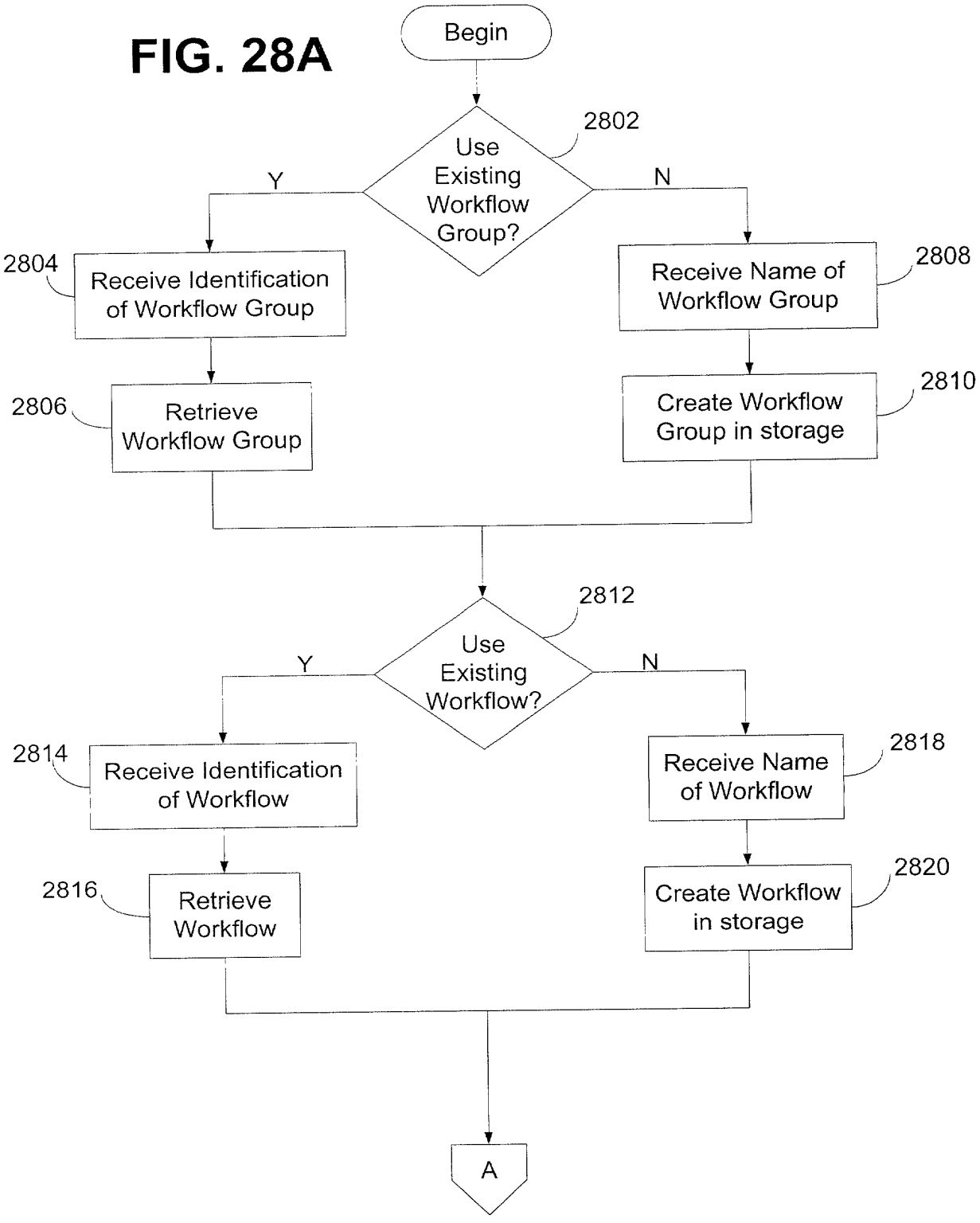

Begin
Use Existing Workflow Group?
2802
Y
N
2804
Receive Identification of Workflow Group
2806
Retrieve Workflow Group
Receive Name of Workflow Group
2808
Create Workflow Group in storage
2810
Use Existing Workflow?
2812
Y
N
2814
Receive Identification of Workflow
2816
Retrieve Workflow
Receive Name of Workflow
2818
Create Workflow in storage
2820
A

FIG. 28B

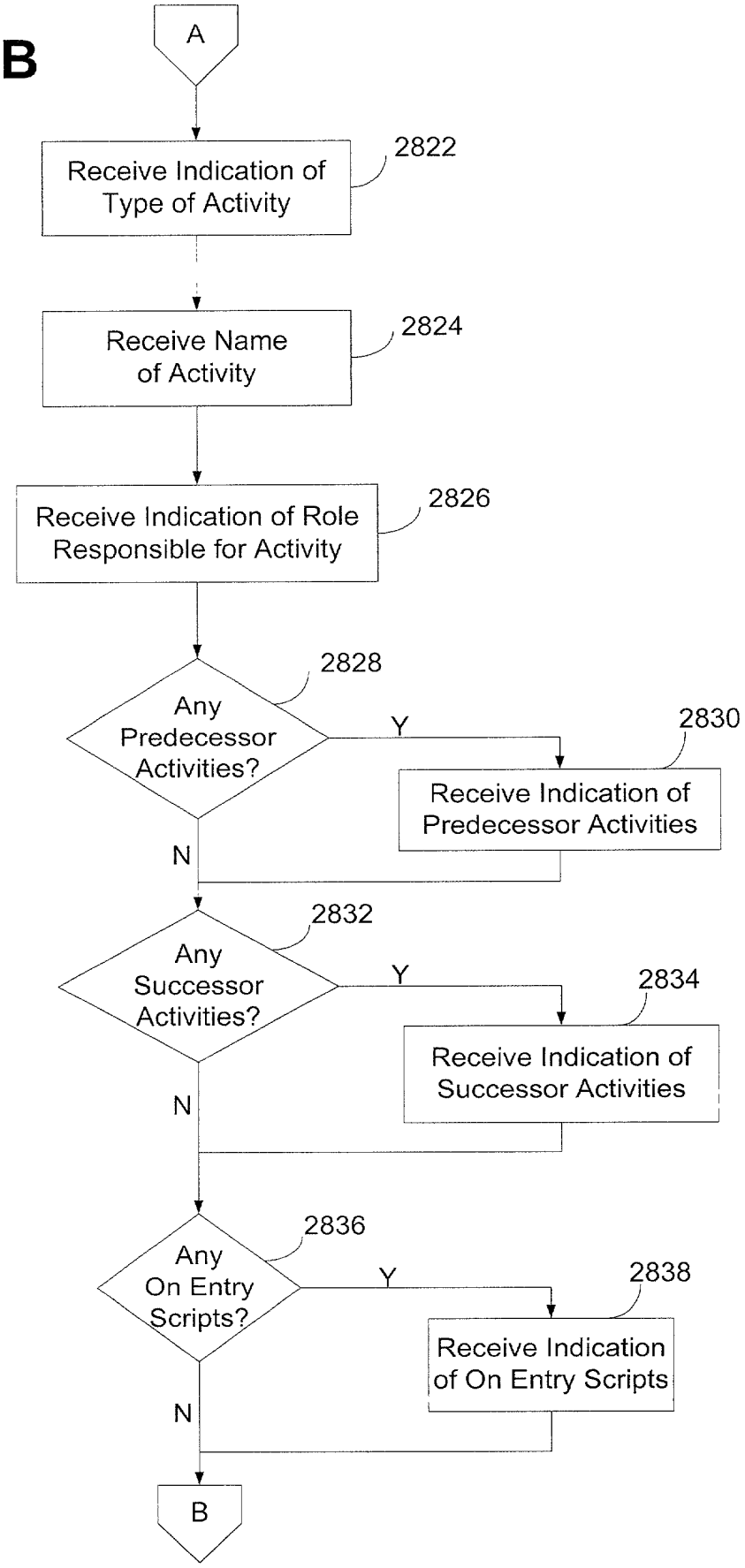

A
Receive Indication of Type of Activity
2822
Receive Name of Activity
2824
Receive Indication of Role Responsible for Activity
2826
Any Predecessor Activities?
2828
Y
Receive Indication of Predecessor Activities
2830
N
Any Successor Activities?
2832
Y
Receive Indication of Successor Activities
2834
N
Any On Entry Scripts?
2836
Y
Receive Indication of On Entry Scripts
2838
N
B

FIG. 28C

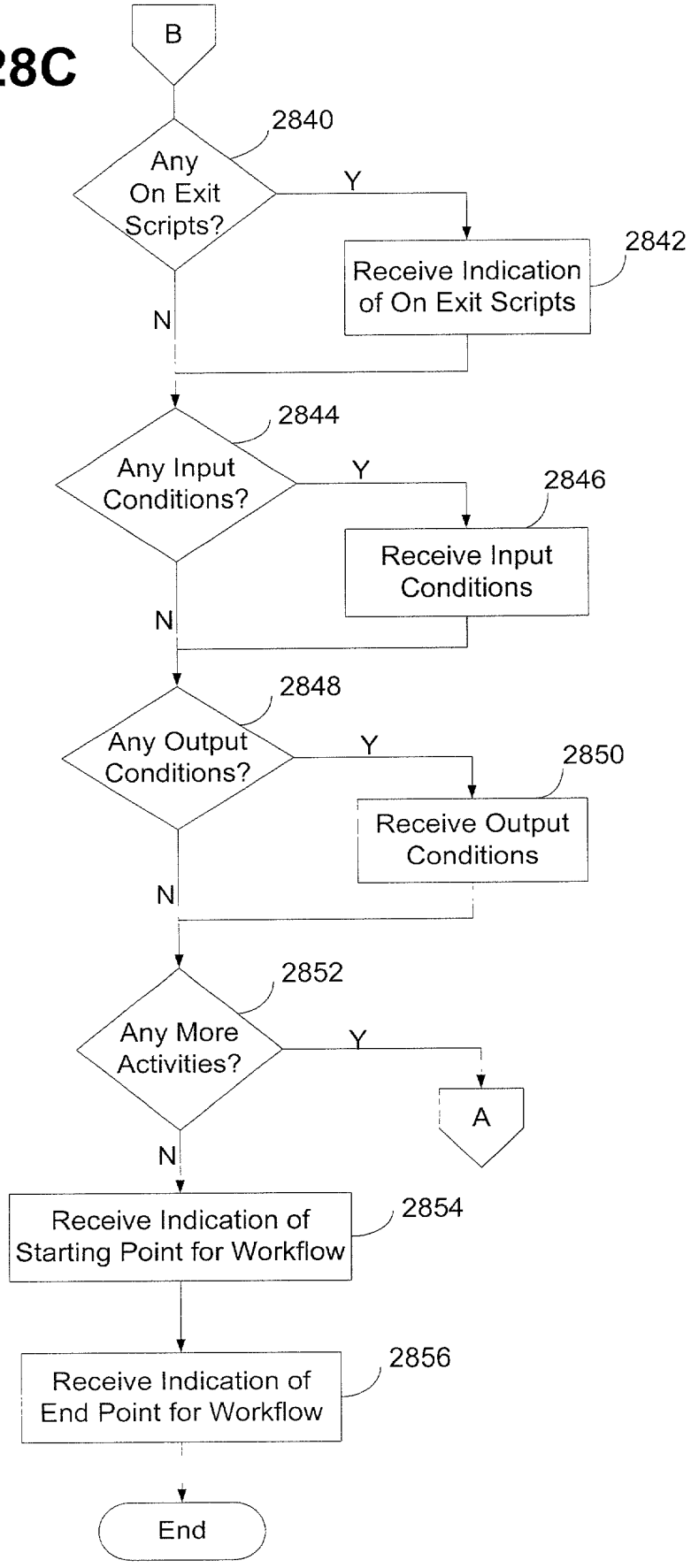

B
2840
Any On Exit Scripts?
Y
2842
Receive Indication of On Exit Scripts
N
2844
Any Input Conditions?
Y
2846
Receive Input Conditions
N
2848
Any Output Conditions?
Y
2850
Receive Output Conditions
N
2852
Any More Activities?
Y
A
N
Receive Indication of Starting Point for Workflow
2854
Receive Indication of End Point for Workflow
2856
End

FIG. 29

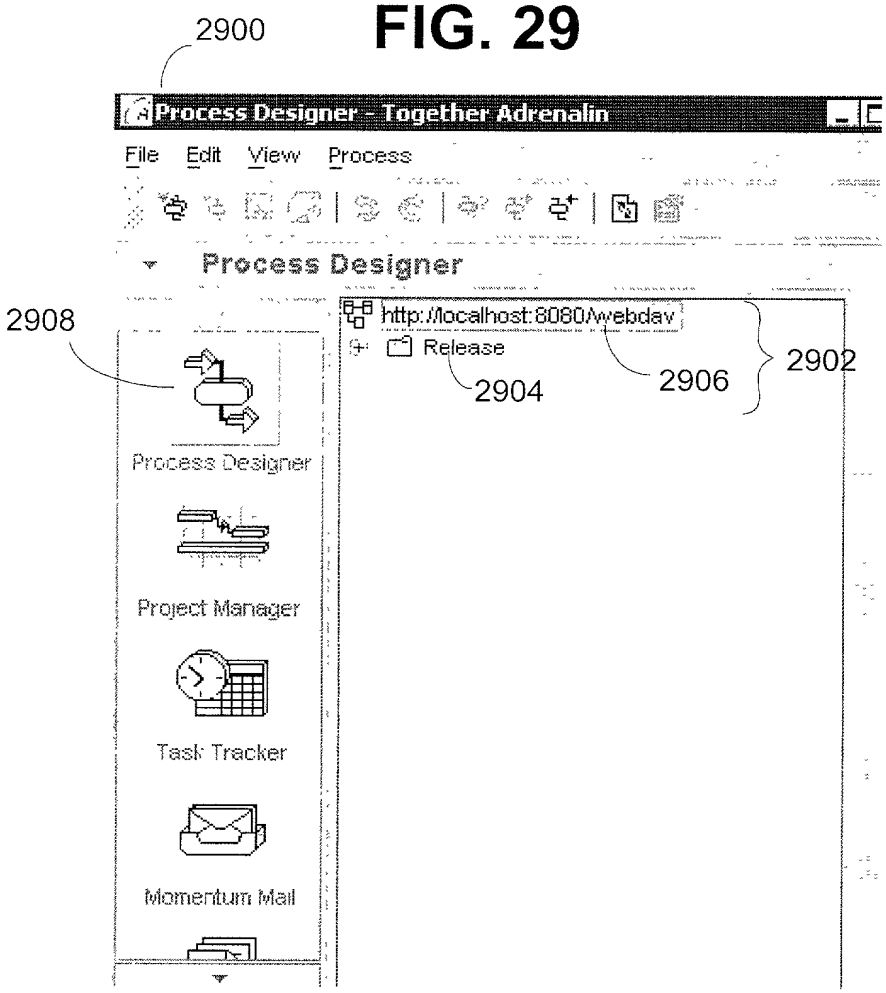

2900
Process Designer - Together Adrenalin
File Edit View Process
Process Designer
2908
http://localhost:8080/webdav
Release
2904
2906
2902
Process Designer
Project Manager
Task Tracker
Momentum Mail

FIG. 30

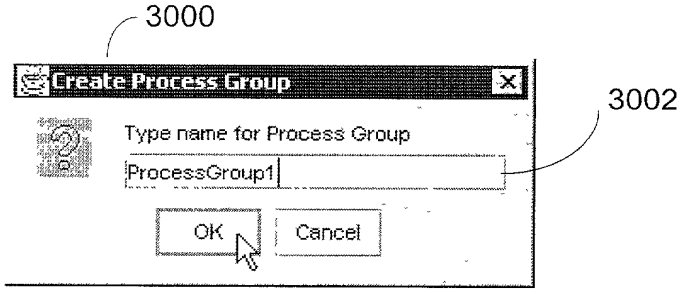

3000
Create Process Group
Type name for Process Group
ProcessGroup1
OK
Cancel
3002

FIG. 31

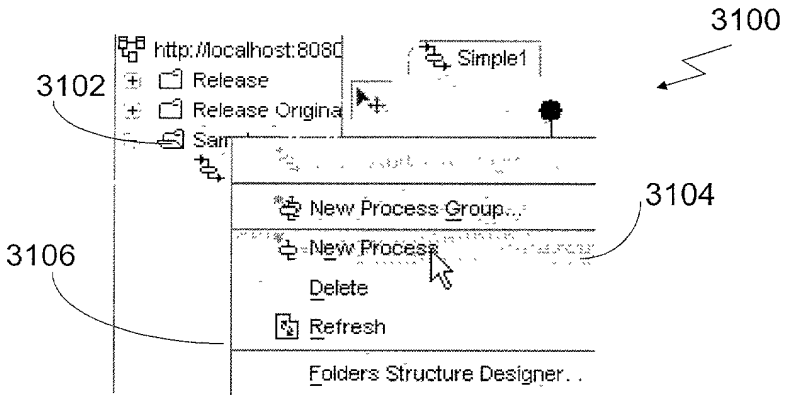

3100
3102
3104
3106
http://localhost:8080
Release
Release Origina
Sam
Simple1
New Process Group...
New Process
Delete
Refresh
Folders Structure Designer...

FIG. 32

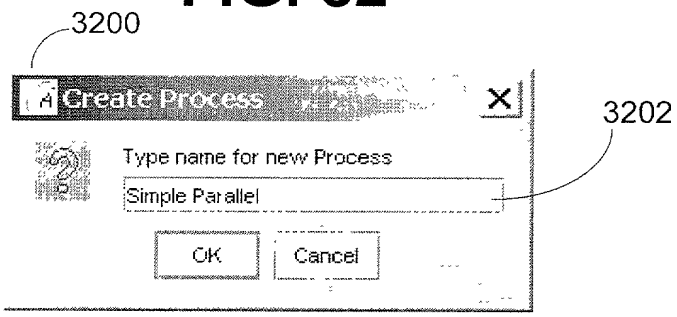

3200
3202
Create Process
Type name for new Process
Simple Parallel
OK
Cancel

FIG. 33A

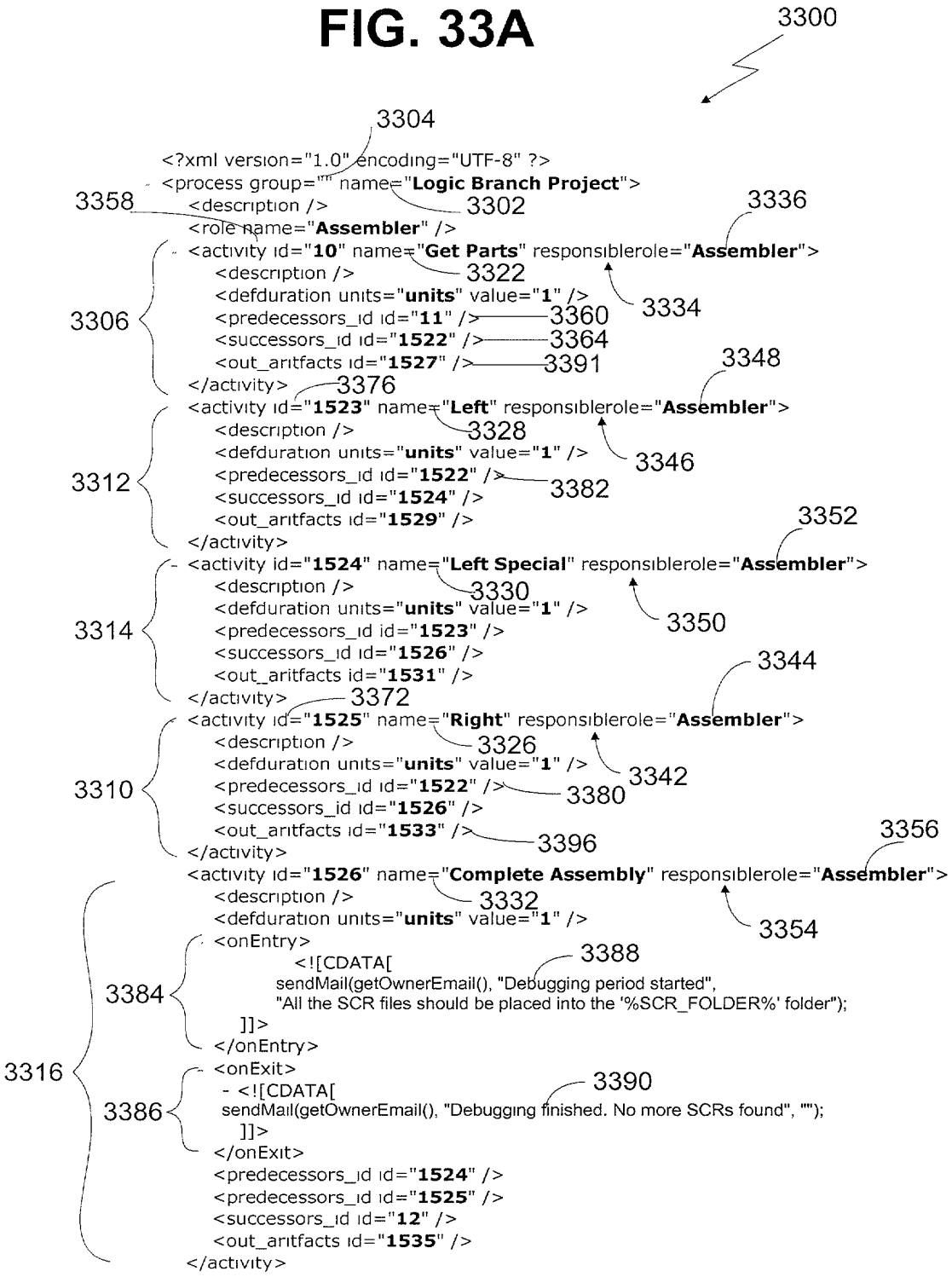
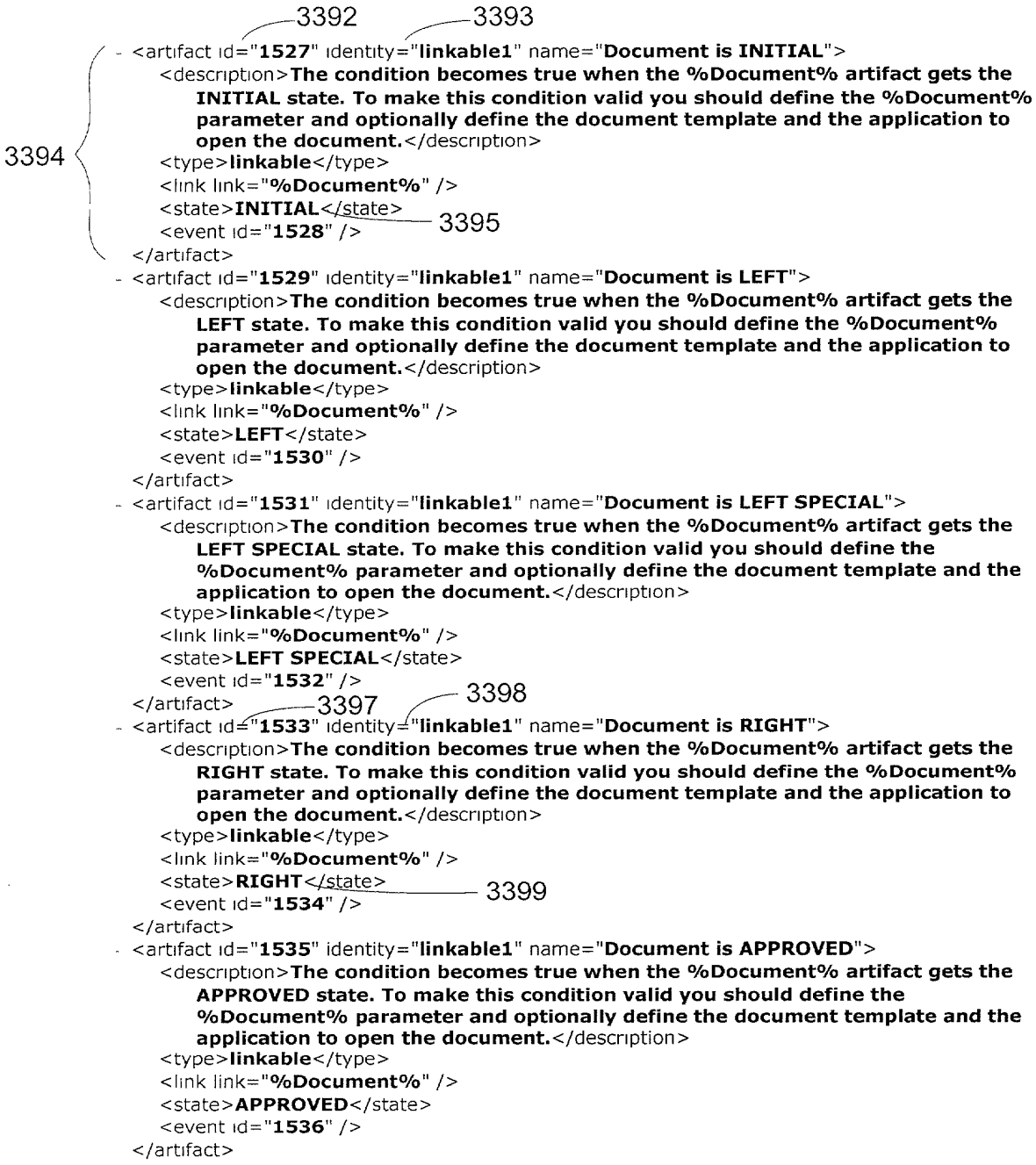

3300
3304
<?xml version="1.0" encoding="UTF-8" ?>
<process group="" name="Logic Branch Project">
3358
<description /> 3302
<role name="Assembler" />
3336
<activity id="10" name="Get Parts" responsiblerole="Assembler">
<description /> 3322
<defduration units="units" value="1" />
3334
3306
<predecessors_id id="11" /> 3360
<successors_id id="1522" /> 3364
<out_aritfacts id="1527" /> 3391
3348
</activity> 3376
<activity id="1523" name="Left" responsiblerole="Assembler">
<description /> 3328
<defduration units="units" value="1" />
3346
3312
<predecessors_id id="1522" /> 3382
<successors_id id="1524" />
<out_aritfacts id="1529" />
</activity>
3352
<activity id="1524" name="Left Special" responsiblerole="Assembler">
<description /> 3330
<defduration units="units" value="1" />
3350
3314
<predecessors_id id="1523" />
<successors_id id="1526" />
<out_aritfacts id="1531" />
3344
</activity> 3372
<activity id="1525" name="Right" responsiblerole="Assembler">
<description /> 3326
<defduration units="units" value="1" />
3342
3310
<predecessors_id id="1522" /> 3380
<successors_id id="1526" />
<out_aritfacts id="1533" /> 3396
</activity>
3356
<activity id="1526" name="Complete Assembly" responsiblerole="Assembler">
<description /> 3332
<defduration units="units" value="1" />
3354
<onEntry>
<![CDATA[
3388
3384
sendMail(getOwnerEmail(), "Debugging period started",
"All the SCR files should be placed into the '%SCR_FOLDER%' folder");
]]>
</onEntry>
3316
<onExit>
<![CDATA[
3390
3386
sendMail(getOwnerEmail(), "Debugging finished. No more SCRs found", "");
]]>
</onExit>
<predecessors_id id="1524" />
<predecessors_id id="1525" />
<successors_id id="12" />
<out_aritfacts id="1535" />
</activity>

FIG. 33B




```
- <artifact id="1527" identity="linkable1" name="Document is INITIAL">
    <description>The condition becomes true when the %Document% artifact gets the
      INITIAL state. To make this condition valid you should define the %Document%
      parameter and optionally define the document template and the application to
      open the document.</description>
    <type>linkable</type>
    <link link="%Document%" />
    <state>INITIAL</state>
    <event id="1528" />
  </artifact>
- <artifact id="1529" identity="linkable1" name="Document is LEFT">
    <description>The condition becomes true when the %Document% artifact gets the
      LEFT state. To make this condition valid you should define the %Document%
      parameter and optionally define the document template and the application to
      open the document.</description>
    <type>linkable</type>
    <link link="%Document%" />
    <state>LEFT</state>
    <event id="1530" />
  </artifact>
- <artifact id="1531" identity="linkable1" name="Document is LEFT SPECIAL">
    <description>The condition becomes true when the %Document% artifact gets the
      LEFT SPECIAL state. To make this condition valid you should define the
      %Document% parameter and optionally define the document template and the
      application to open the document.</description>
    <type>linkable</type>
    <link link="%Document%" />
    <state>LEFT SPECIAL</state>
    <event id="1532" />
  </artifact>
- <artifact id="1533" identity="linkable1" name="Document is RIGHT">
    <description>The condition becomes true when the %Document% artifact gets the
      RIGHT state. To make this condition valid you should define the %Document%
      parameter and optionally define the document template and the application to
      open the document.</description>
    <type>linkable</type>
    <link link="%Document%" />
    <state>RIGHT</state>
    <event id="1534" />
  </artifact>
- <artifact id="1535" identity="linkable1" name="Document is APPROVED">
    <description>The condition becomes true when the %Document% artifact gets the
      APPROVED state. To make this condition valid you should define the
      %Document% parameter and optionally define the document template and the
      application to open the document.</description>
    <type>linkable</type>
    <link link="%Document%" />
    <state>APPROVED</state>
    <event id="1536" />
  </artifact>
```

FIG. 33C

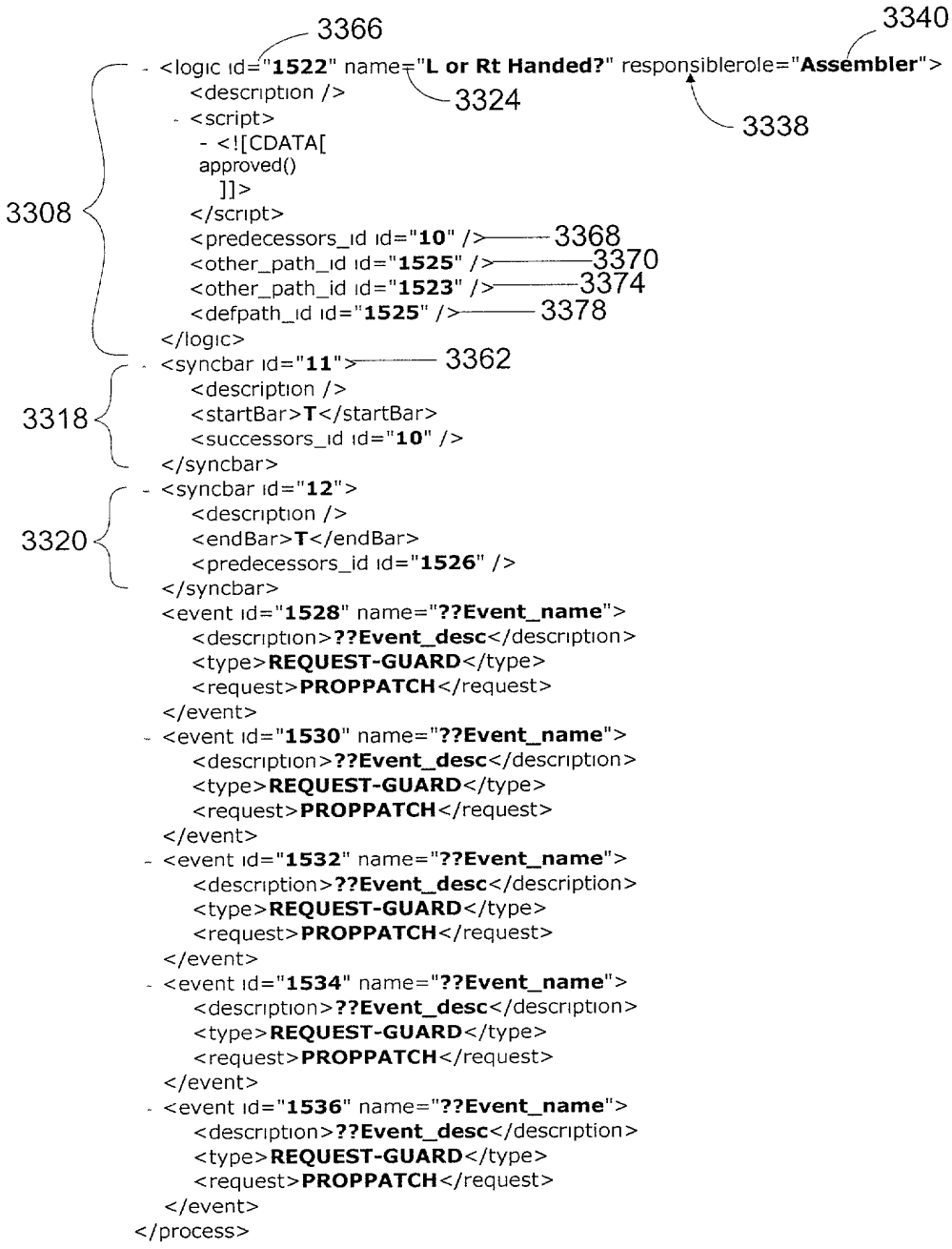

3366
3340
<logic id="1522" name="L or Rt Handed?" responsiblerole="Assembler">
3324
3338
<description />
<script>
<![CDATA[
approved()
]]>
</script>
3308
<predecessors_id id="10" />
3368
<other_path_id id="1525" />
3370
<other_path_id id="1523" />
3374
<defpath_id id="1525" />
3378
</logic>
<syncbar id="11">
3362
<description />
<startBar>T</startBar>
<successors_id id="10" />
3318
</syncbar>
<syncbar id="12">
<description />
<endBar>T</endBar>
<predecessors_id id="1526" />
3320
</syncbar>
<event id="1528" name="??Event_name">
<description>??Event_desc</description>
<type>REQUEST-GUARD</type>
<request>PROPPATCH</request>
</event>
<event id="1530" name="??Event_name">
<description>??Event_desc</description>
<type>REQUEST-GUARD</type>
<request>PROPPATCH</request>
</event>
<event id="1532" name="??Event_name">
<description>??Event_desc</description>
<type>REQUEST-GUARD</type>
<request>PROPPATCH</request>
</event>
<event id="1534" name="??Event_name">
<description>??Event_desc</description>
<type>REQUEST-GUARD</type>
<request>PROPPATCH</request>
</event>
<event id="1536" name="??Event_name">
<description>??Event_desc</description>
<type>REQUEST-GUARD</type>
<request>PROPPATCH</request>
</event>
</process>

FIG. 34

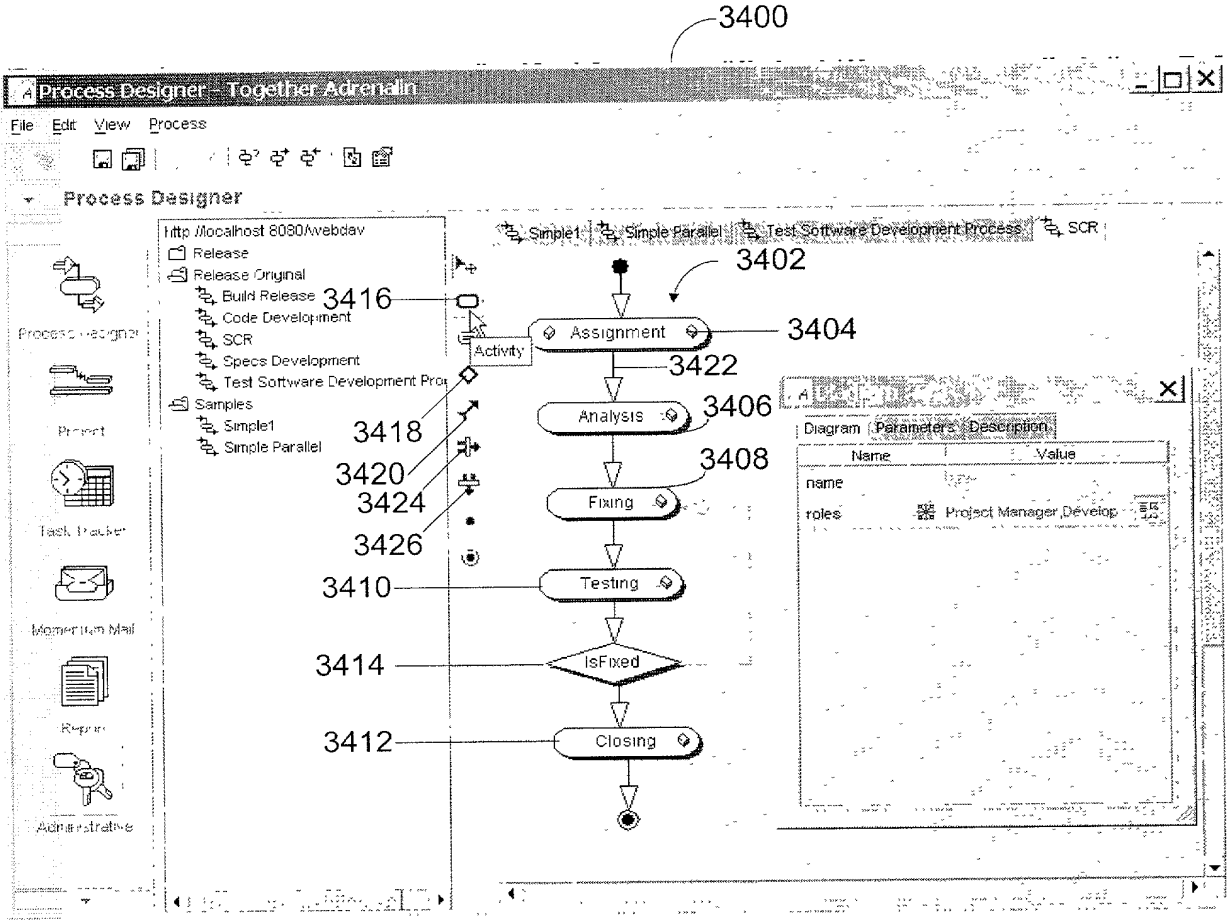

3400
Process Designer - Together Adrenalin
File Edit View Process
Process Designer
http://localhost:8080/webdav
Release
Release Original
Build Release
Code Development
SCR
Specs Development
Test Software Development Pro
Samples
Simple1
Simple Parallel
Simple1
Simple Parallel
Test Software Development Process
SCR
3402
3416
Activity
Assignment
3404
3422
Analysis
3406
3418
3420
3424
3426
Fixing
3408
3410
Testing
3414
IsFixed
3412
Closing
Diagram
Parameters
Description
Name
Value
name
roles
Project Manager,Develop

FIG. 35

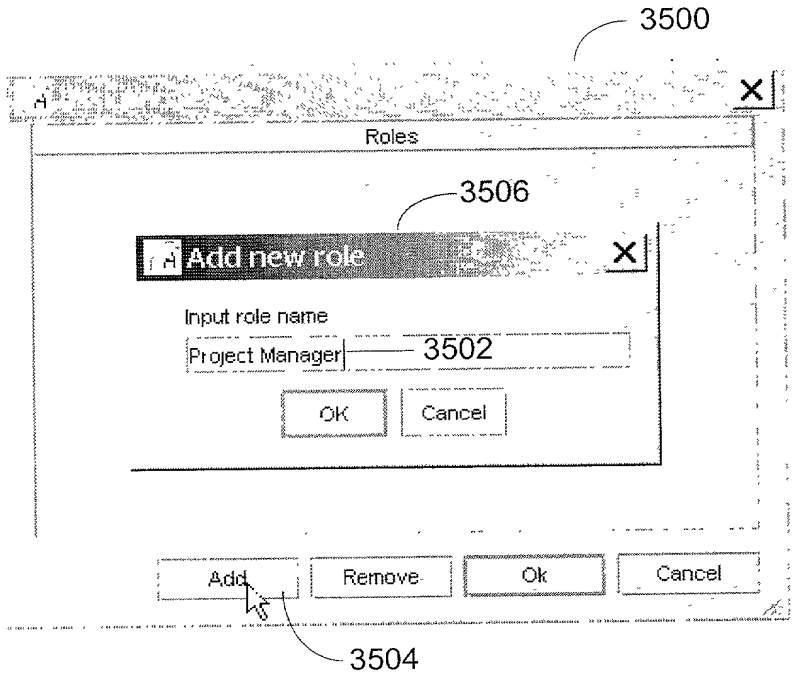

3500
Roles
3506
Add new role
Input role name
Project Manager
3502
OK
Cancel
Add
Remove
Ok
Cancel
3504

FIG. 36

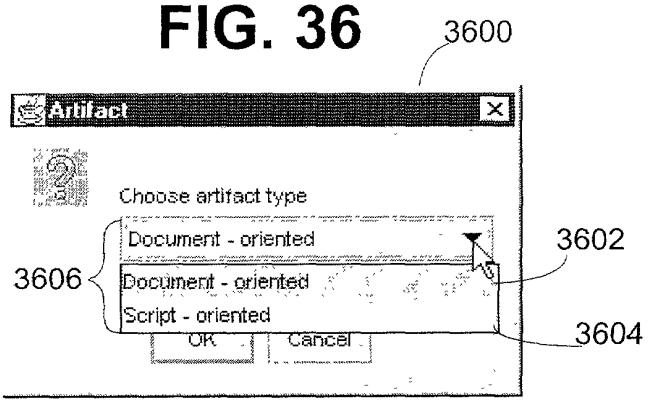

3600
Artifact
Choose artifact type
Document - oriented
3602
3606
Document - oriented
Script - oriented
3604
OK
Cancel

FIG. 37

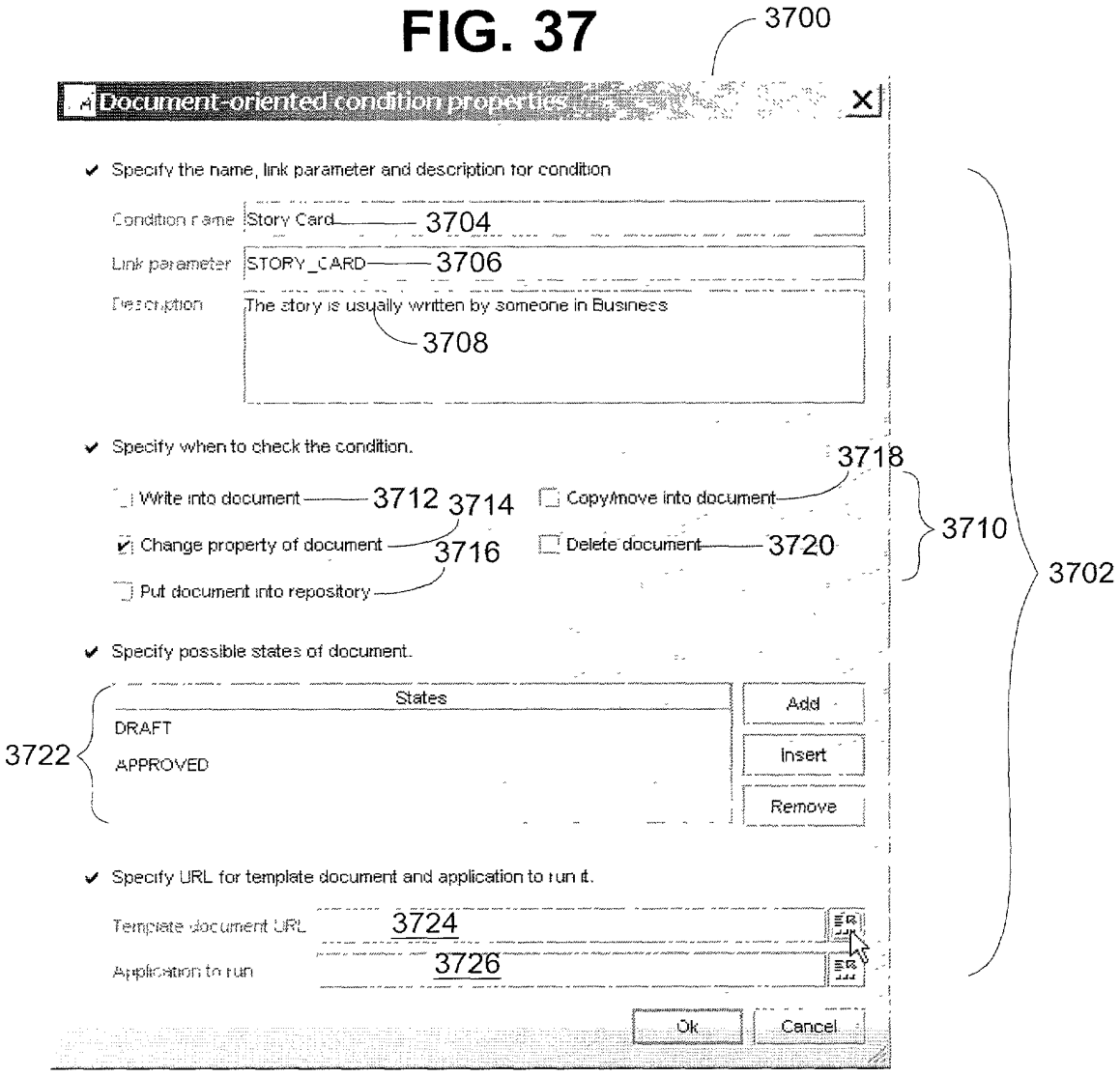

3700
Document-oriented condition properties
Specify the name, link parameter and description for condition
Condition name
Story Card
3704
Link parameter
STORY_CARD
3706
Description
The story is usually written by someone in Business
3708
Specify when to check the condition.
3718
Write into document
3712
3714
Copy/move into document
Change property of document
3716
Delete document
3720
3710
Put document into repository
3702
Specify possible states of document.
States
Add
3722
DRAFT
Insert
APPROVED
Remove
Specify URL for template document and application to run it.
Template document URL
3724
Application to run
3726
Ok
Cancel

FIG. 38

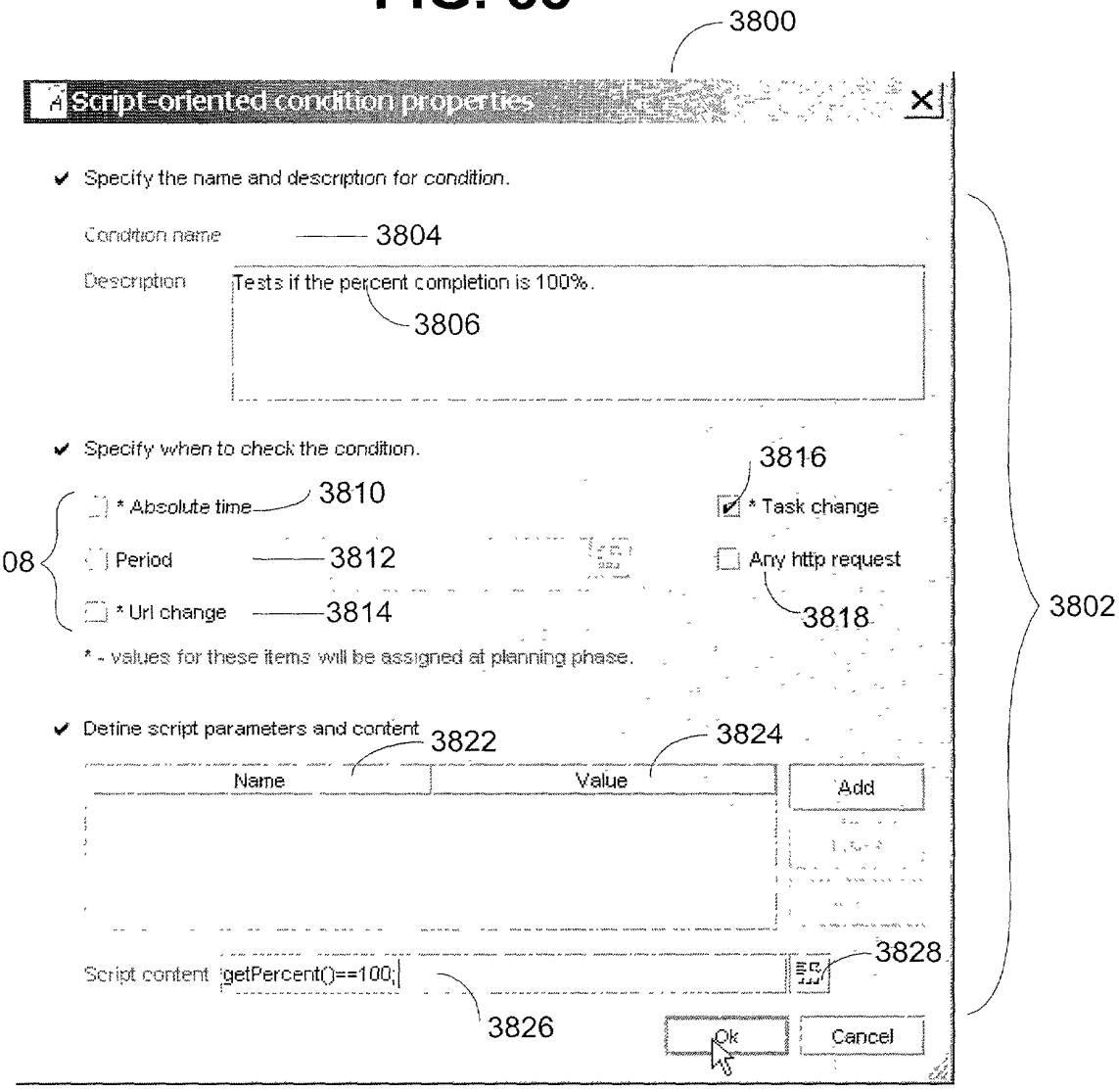

3800
Script-oriented condition properties
Specify the name and description for condition.
Condition name
3804
Description
Tests if the percent completion is 100%.
3806
Specify when to check the condition.
3816
* Absolute time
3810
* Task change
3808
Period
3812
Any http request
* Url change
3814
3818
3802
* - values for these items will be assigned at planning phase.
Define script parameters and content
3822
3824
Name
Value
Add
Script content
getPercent()==100;
3828
3826
Ok
Cancel

FIG. 39

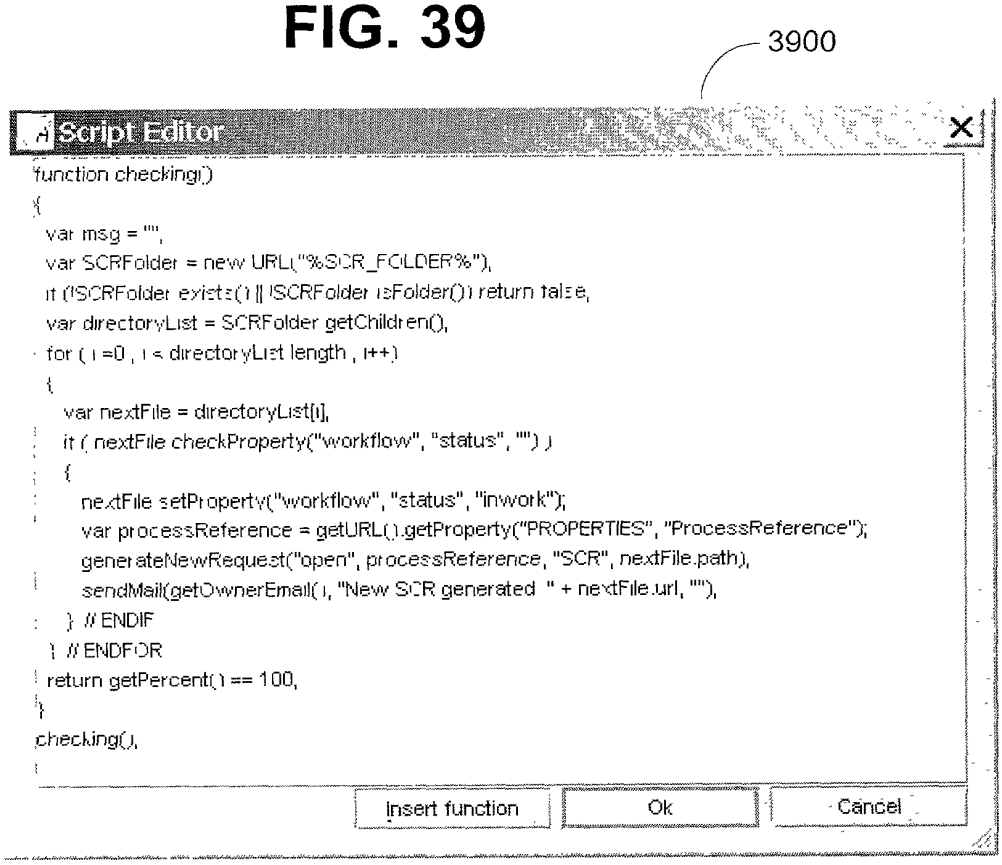

3900
Script Editor
function checking()
{
var msg = "",
var SCRFolder = new URL("%SCR_FOLDER%"),
if (!SCRFolder.exists() || !SCRFolder.isFolder()) return false,
var directoryList = SCRFolder.getChildren(),
for (i=0 ; i < directoryList.length ; i++)
{
var nextFile = directoryList[i],
if (nextFile.checkProperty("workflow", "status", ""))
{
nextFile.setProperty("workflow", "status", "inwork");
var processReference = getURL().getProperty("PROPERTIES", "ProcessReference");
generateNewRequest("open", processReference, "SCR", nextFile.path),
sendMail(getOwnerEmail(), "New SCR generated " + nextFile.url, ""),
} // ENDIF
} // ENDFOR
return getPercent() == 100,
}
checking(),
Insert function
Ok
Cancel

FIG. 40

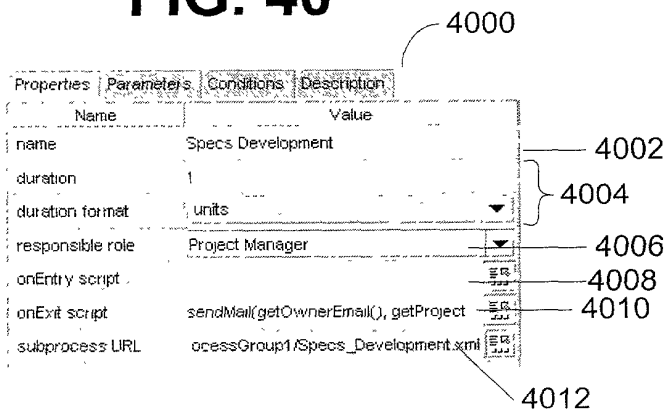

4000
Properties
Parameters
Conditions
Description
Name
Value
name
Specs Development
duration
1
duration format
units
responsible role
Project Manager
onEntry script
onExit script
sendMail(getOwnerEmail(), getProject
subprocess URL
ocessGroup1/Specs_Development.xml
4002
4004
4006
4008
4010
4012

FIG. 41A

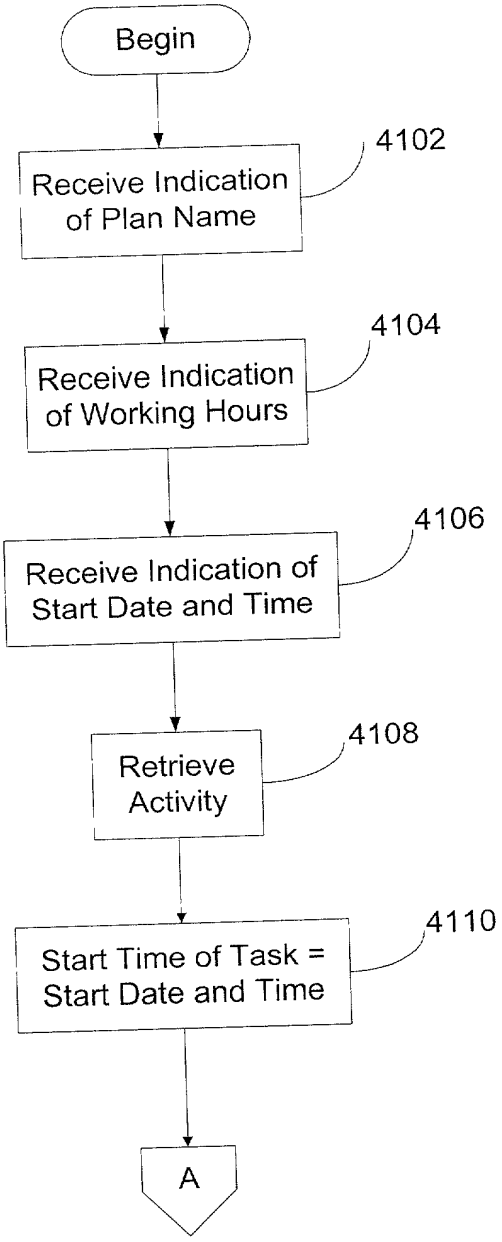

Begin
Receive Indication of Plan Name
4102
Receive Indication of Working Hours
4104
Receive Indication of Start Date and Time
4106
Retrieve Activity
4108
Start Time of Task = Start Date and Time
4110
A

FIG. 41B

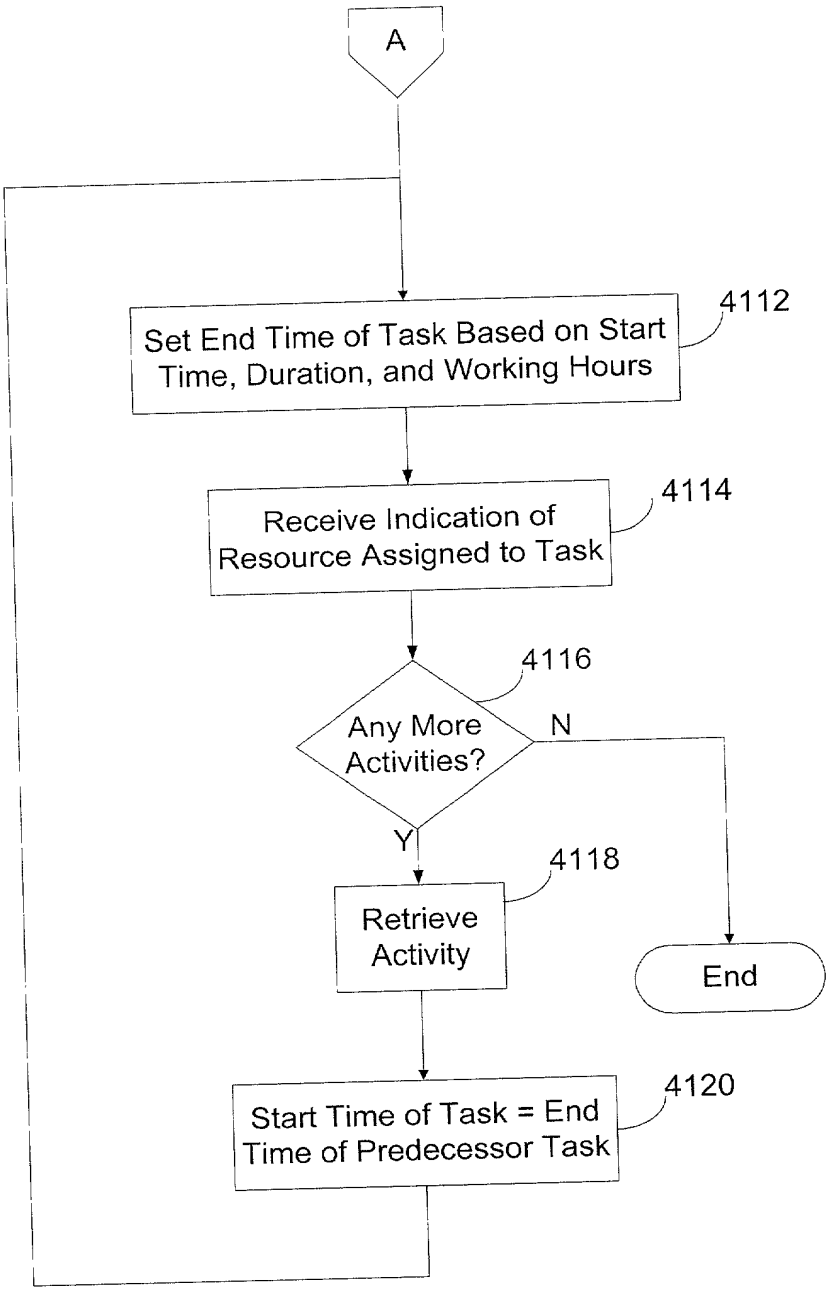

A
Set End Time of Task Based on Start Time, Duration, and Working Hours
4112
Receive Indication of Resource Assigned to Task
4114
Any More Activities?
4116
N
Y
Retrieve Activity
4118
End
Start Time of Task = End Time of Predecessor Task
4120

FIG. 42

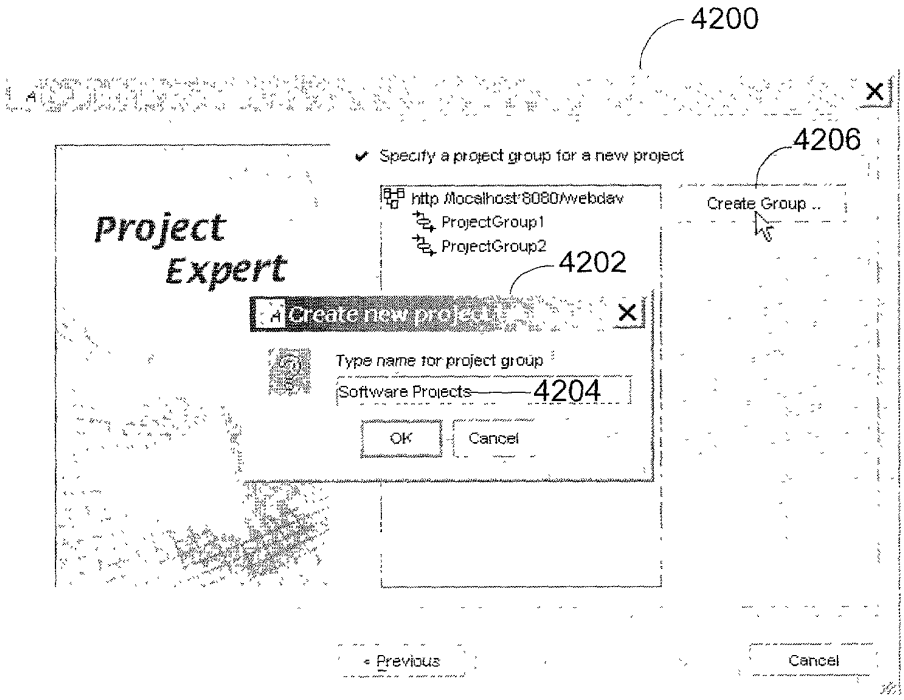


FIG. 43

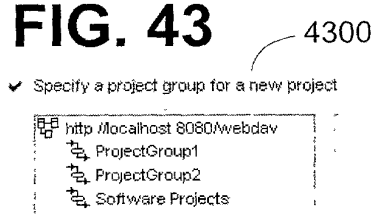


FIG. 44

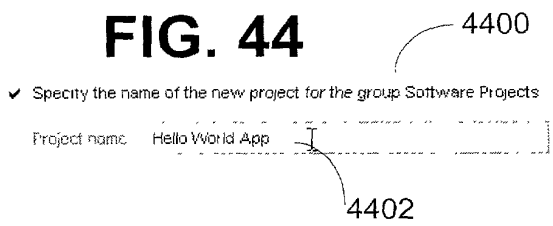


FIG. 45

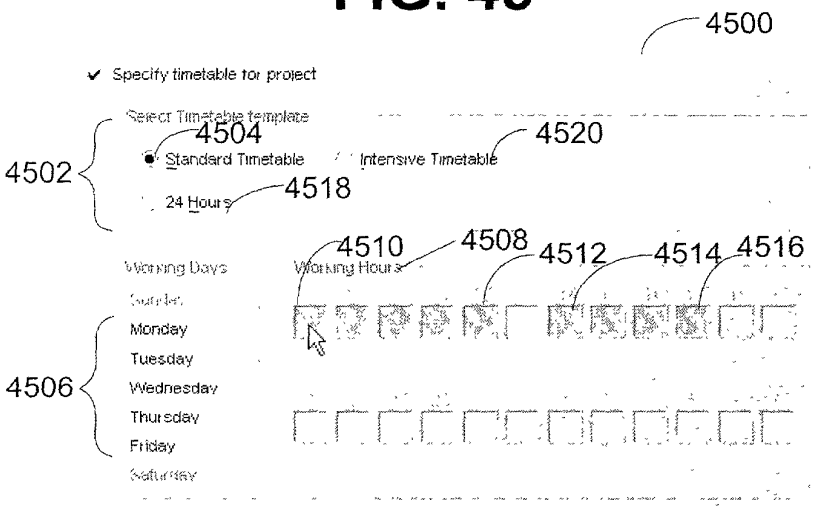

4500
Specify timetable for project
Select Timetable template
4504
4502
Standard Timetable
Intensive Timetable
4520
24 Hours
4518
4510
4508
4512
4514
4516
Working Days
Working Hours
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
4506

FIG. 46

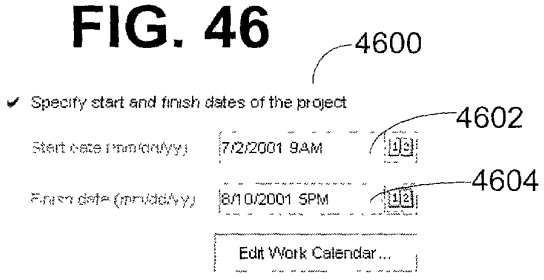

4600
Specify start and finish dates of the project
4602
Start date (mm/dd/yy)
7/2/2001 9AM
4604
Finish date (mm/dd/yy)
8/10/2001 5PM
Edit Work Calendar...

FIG. 47

4700
<?xml version="1.0" encoding="UTF-8" ?>
<process group="" name="Serial & Parallel">
<description />
<role name="Worker" />
<activity id="10" name="Serial 1" responsiblerole="Worker">
<description />
<defduration units="hours" value="9" />
4704
<predecessors_id id="11" />
<successors_id id="1522" />
4702
</activity>
<activity id="1523" name="Parallel 1" responsiblerole="Worker">
<description />
<defduration units="hours" value="24" />
4710
<predecessors_id id="1522" />
<successors_id id="1525" />
4706
</activity>
<activity id="1524" name="Parallel 2" responsiblerole="Worker">
<description />
<defduration units="hours" value="24" />
4712
<predecessors_id id="1522" />
<successors_id id="1525" />
4708
</activity>
<activity id="1526" name="Serial 2" responsiblerole="Worker">
<description />
<defduration units="hours" value="24" />
4716
<predecessors_id id="1525" />
<successors_id id="12" />
4714
</activity>
<syncbar id="11">
<description />
<startBar>T</startBar>
<successors_id id="10" />
</syncbar>
<syncbar id="12">
<description />
<endBar>T</endBar>
<predecessors_id id="1526" />
</syncbar>
<syncbar id="1522" name="SyncBarH1">
<description />
<predecessors_id id="10" />
<successors_id id="1523" />
<successors_id id="1524" />
</syncbar>
<syncbar id="1525" name="SyncBarH2">
<description />
<predecessors_id id="1523" />
<predecessors_id id="1524" />
<successors_id id="1526" />
</syncbar>
</process>

FIG. 48

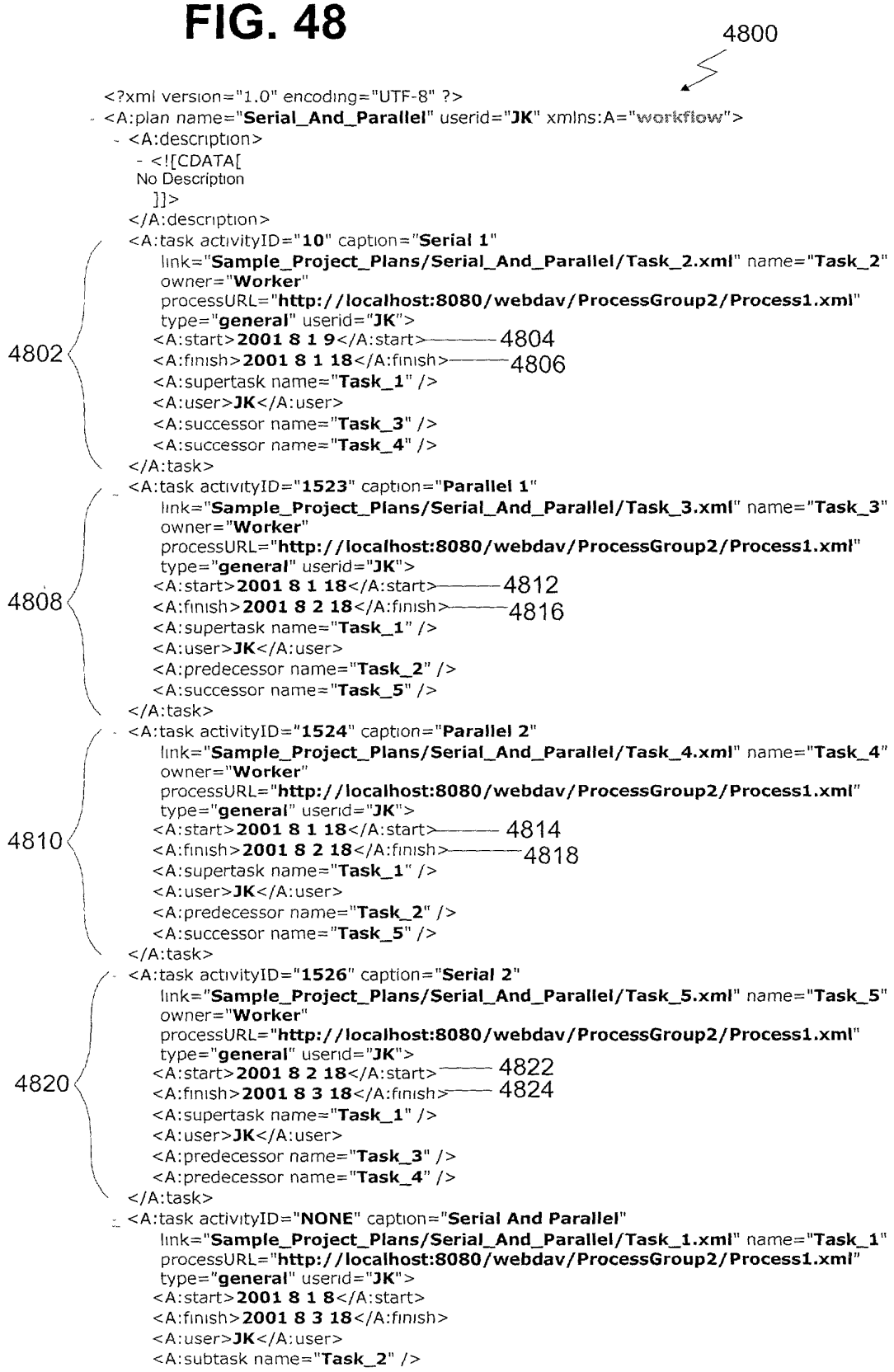

4800
<?xml version="1.0" encoding="UTF-8" ?>
<A:plan name="Serial_And_Parallel" userid="JK" xmlns:A="workflow">
<A:description>
<![CDATA[
No Description
]]>
</A:description>
4802
<A:task activityID="10" caption="Serial 1"
link="Sample_Project_Plans/Serial_And_Parallel/Task_2.xml" name="Task_2"
owner="Worker"
processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
type="general" userid="JK">
<A:start>2001 8 1 9</A:start>
4804
<A:finish>2001 8 1 18</A:finish>
4806
<A:supertask name="Task_1" />
<A:user>JK</A:user>
<A:successor name="Task_3" />
<A:successor name="Task_4" />
</A:task>
4808
<A:task activityID="1523" caption="Parallel 1"
link="Sample_Project_Plans/Serial_And_Parallel/Task_3.xml" name="Task_3"
owner="Worker"
processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
type="general" userid="JK">
<A:start>2001 8 1 18</A:start>
4812
<A:finish>2001 8 2 18</A:finish>
4816
<A:supertask name="Task_1" />
<A:user>JK</A:user>
<A:predecessor name="Task_2" />
<A:successor name="Task_5" />
</A:task>
4810
<A:task activityID="1524" caption="Parallel 2"
link="Sample_Project_Plans/Serial_And_Parallel/Task_4.xml" name="Task_4"
owner="Worker"
processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
type="general" userid="JK">
<A:start>2001 8 1 18</A:start>
4814
<A:finish>2001 8 2 18</A:finish>
4818
<A:supertask name="Task_1" />
<A:user>JK</A:user>
<A:predecessor name="Task_2" />
<A:successor name="Task_5" />
</A:task>
4820
<A:task activityID="1526" caption="Serial 2"
link="Sample_Project_Plans/Serial_And_Parallel/Task_5.xml" name="Task_5"
owner="Worker"
processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
type="general" userid="JK">
<A:start>2001 8 2 18</A:start>
4822
<A:finish>2001 8 3 18</A:finish>
4824
<A:supertask name="Task_1" />
<A:user>JK</A:user>
<A:predecessor name="Task_3" />
<A:predecessor name="Task_4" />
</A:task>
<A:task activityID="NONE" caption="Serial And Parallel"
link="Sample_Project_Plans/Serial_And_Parallel/Task_1.xml" name="Task_1"
processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
type="general" userid="JK">
<A:start>2001 8 1 8</A:start>
<A:finish>2001 8 3 18</A:finish>
<A:user>JK</A:user>
<A:subtask name="Task_2" />

FIG. 49

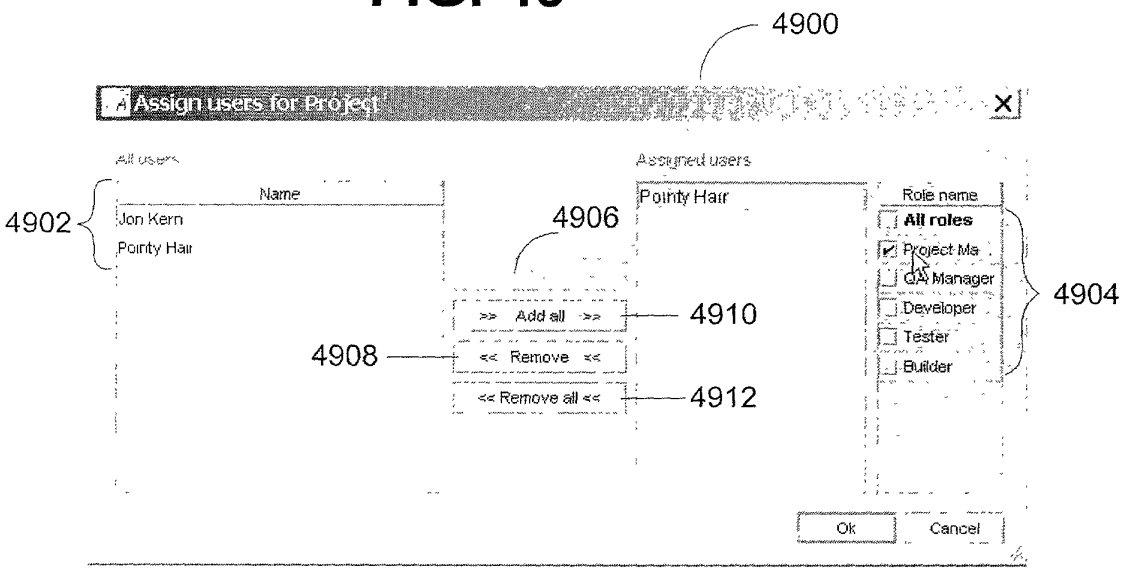

4900
Assign users for Project
All users
Assigned users
Name
Jon Kern
Pointy Hair
4902
Pointy Hair
4906
Role name
All roles
Project Ma
QA Manager
Developer
Tester
Builder
4904
>> Add all >>
4910
4908
<< Remove <<
<< Remove all <<
4912
Ok
Cancel

FIG. 50

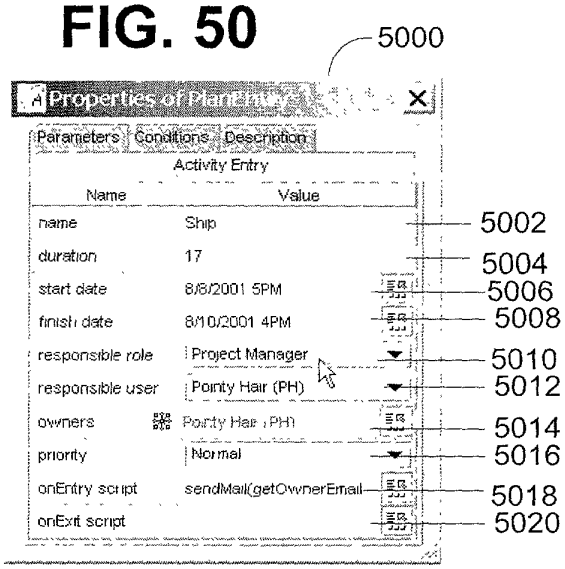

5000
Properties of PlanEntry
Parameters
Conditions
Description
Activity Entry
Name
Value
name
Ship
5002
duration
17
5004
start date
8/8/2001 5PM
5006
finish date
8/10/2001 4PM
5008
responsible role
Project Manager
5010
responsible user
Pointy Hair (PH)
5012
owners
Pointy Hair (PH)
5014
priority
Normal
5016
onEntry script
sendMail(getOwnerEmail
5018
onExit script
5020

FIG. 51

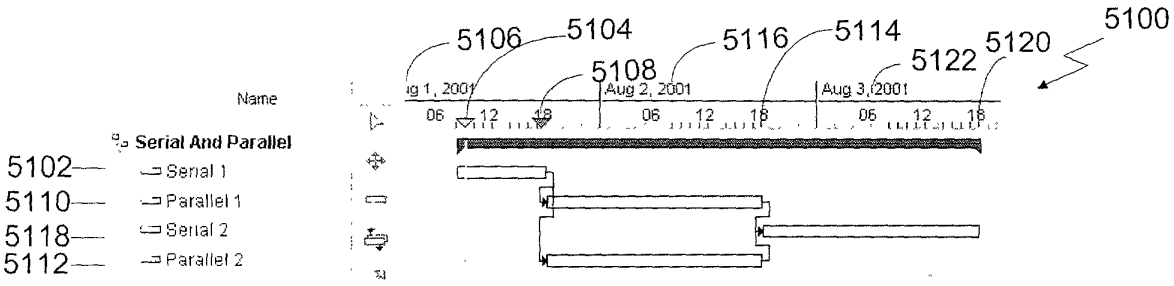

5100
5102
5104
5106
5108
5110
5112
5114
5116
5118
5120
5122
Name
Serial And Parallel
Serial 1
Parallel 1
Serial 2
Parallel 2
Aug 2, 2001
Aug 3, 2001
06
12
18

FIG. 52

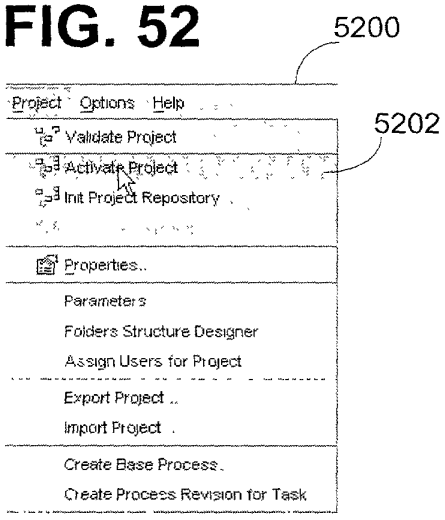

5200
5202
Project
Options
Help
Validate Project
Activate Project
Init Project Repository
Properties..
Parameters
Folders Structure Designer
Assign Users for Project
Export Project ..
Import Project
Create Base Process..
Create Process Revision for Task

FIG. 53

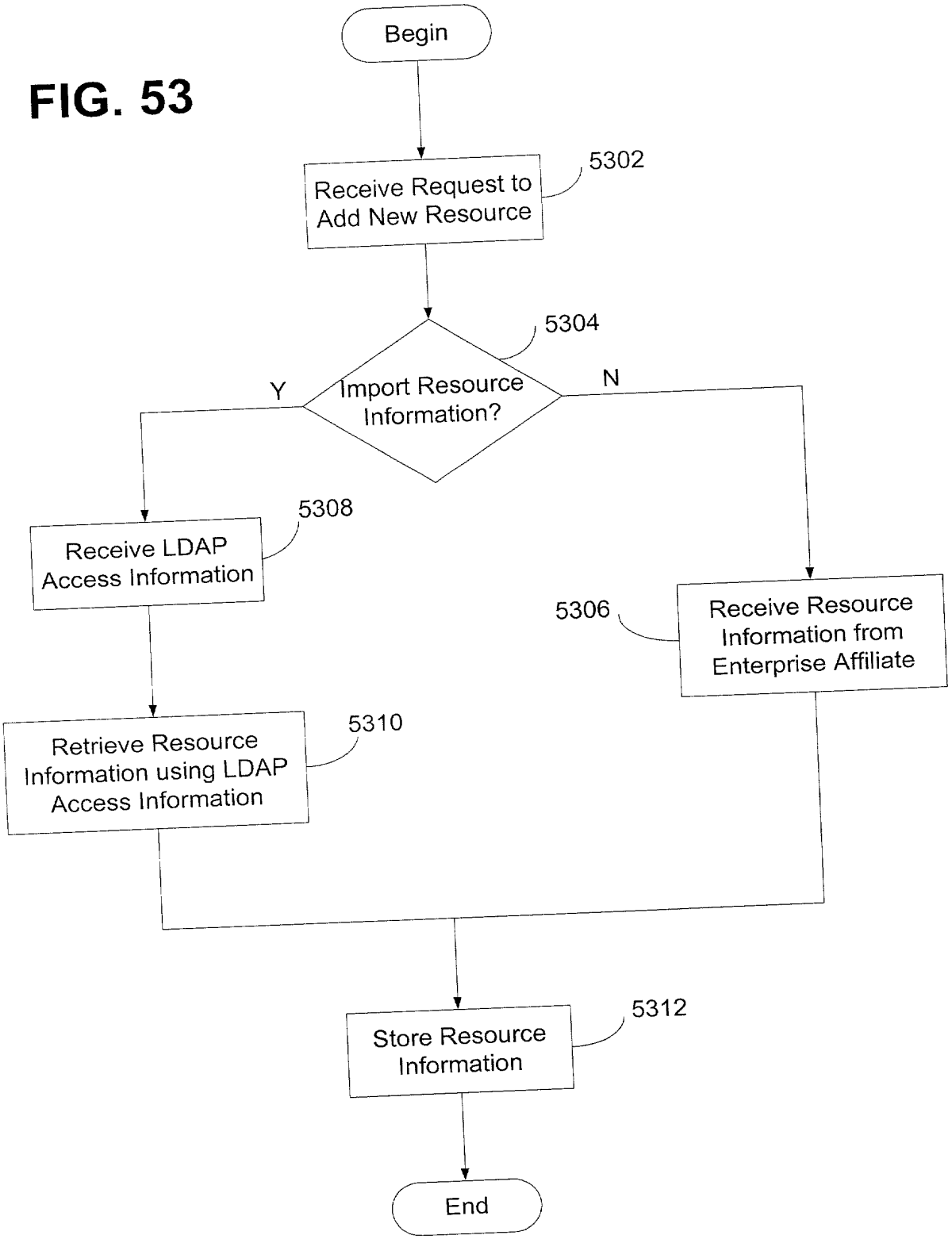

Begin
Receive Request to Add New Resource
5302
Import Resource Information?
5304
Y
N
Receive LDAP Access Information
5308
Retrieve Resource Information using LDAP Access Information
5310
Receive Resource Information from Enterprise Affiliate
5306
Store Resource Information
5312
End

FIG. 54

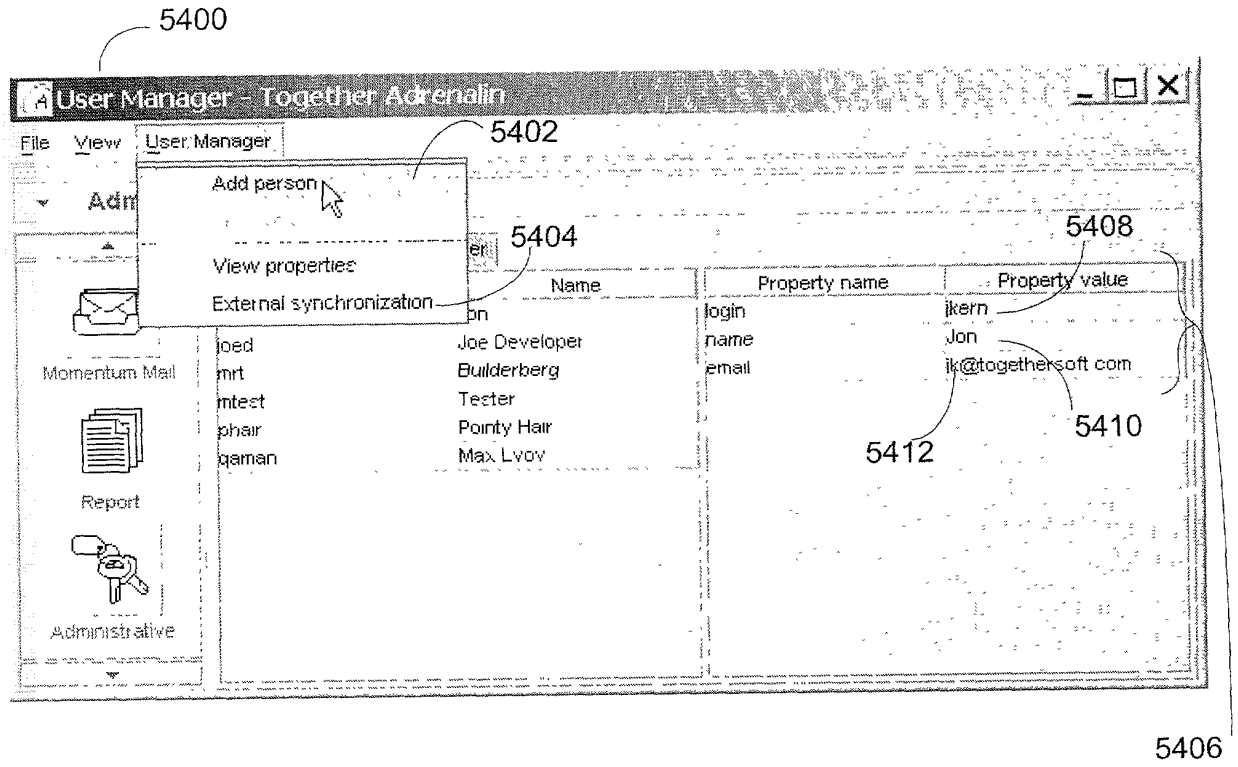

5400
User Manager - Together Adrenalin
File
View
User Manager
Add person
View properties
External synchronization
5402
5404
5408
Momentum Mail
Report
Administrative
Name
Joe Developer
Builderberg
Tester
Pointy Hair
Max Lvov
Property name
Property value
login
ikern
name
Jon
email
jk@togethersoft.com
5410
5412
5406

FIG. 55

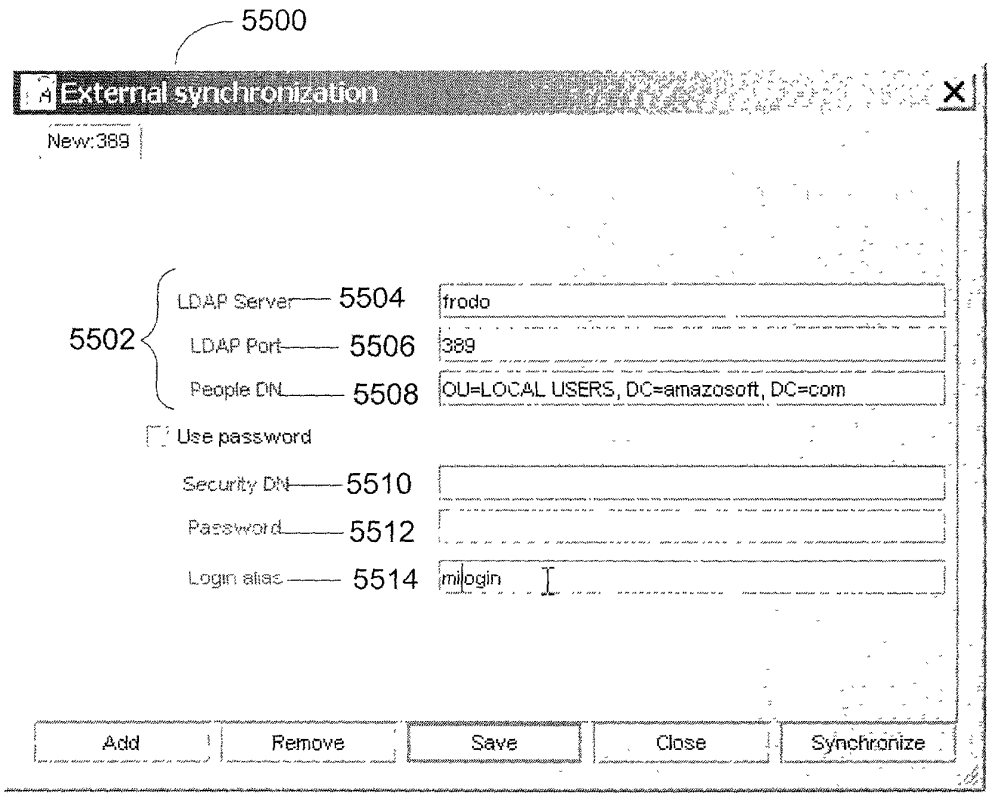

5500
External synchronization
New:389
5502
LDAP Server
5504
frodo
LDAP Port
5506
389
People DN
5508
OU=LOCAL USERS, DC=amazosoft, DC=com
Use password
Security DN
5510
Password
5512
Login alias
5514
milogin
Add
Remove
Save
Close
Synchronize

FIG. 56

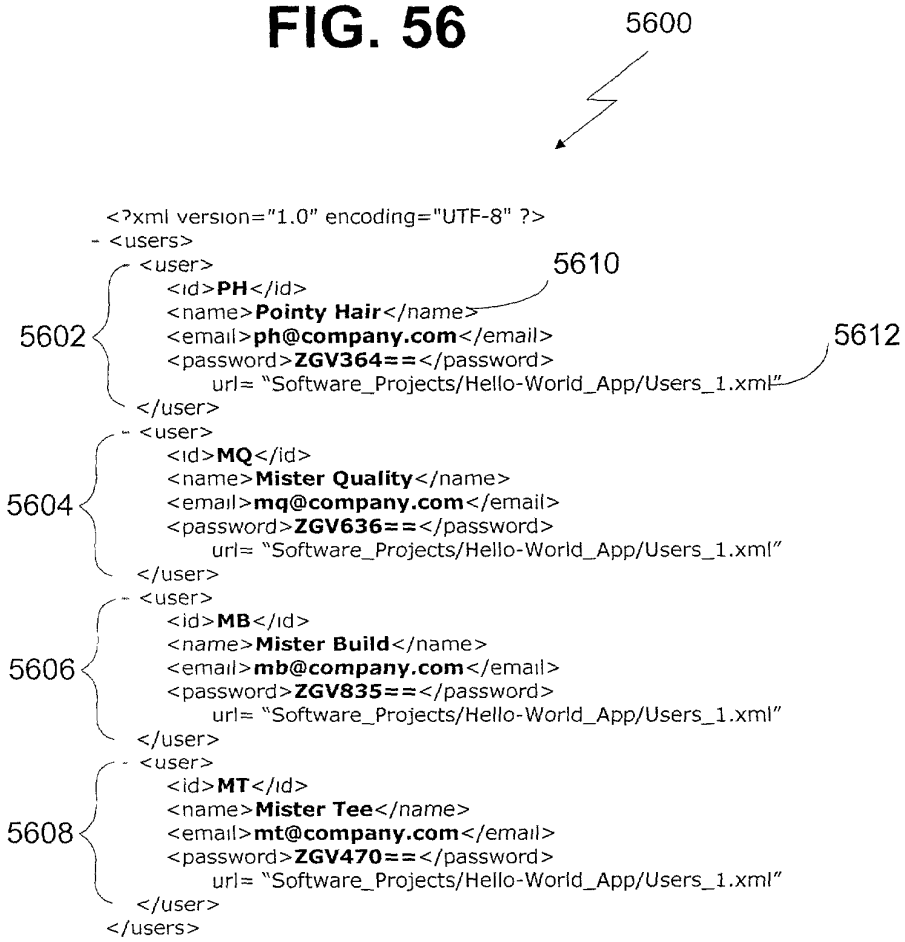

5600
<?xml version="1.0" encoding="UTF-8" ?>
- <users>
- <user>
<id>PH</id>
<name>Pointy Hair</name>
<email>ph@company.com</email>
<password>ZGV364==</password>
url= "Software_Projects/Hello-World_App/Users_1.xml"
</user>
- <user>
<id>MQ</id>
<name>Mister Quality</name>
<email>mq@company.com</email>
<password>ZGV636==</password>
url= "Software_Projects/Hello-World_App/Users_1.xml"
</user>
- <user>
<id>MB</id>
<name>Mister Build</name>
<email>mb@company.com</email>
<password>ZGV835==</password>
url= "Software_Projects/Hello-World_App/Users_1.xml"
</user>
- <user>
<id>MT</id>
<name>Mister Tee</name>
<email>mt@company.com</email>
<password>ZGV470==</password>
url= "Software_Projects/Hello-World_App/Users_1.xml"
</user>
</users>
5610
5602
5612
5604
5606
5608

FIG. 57A

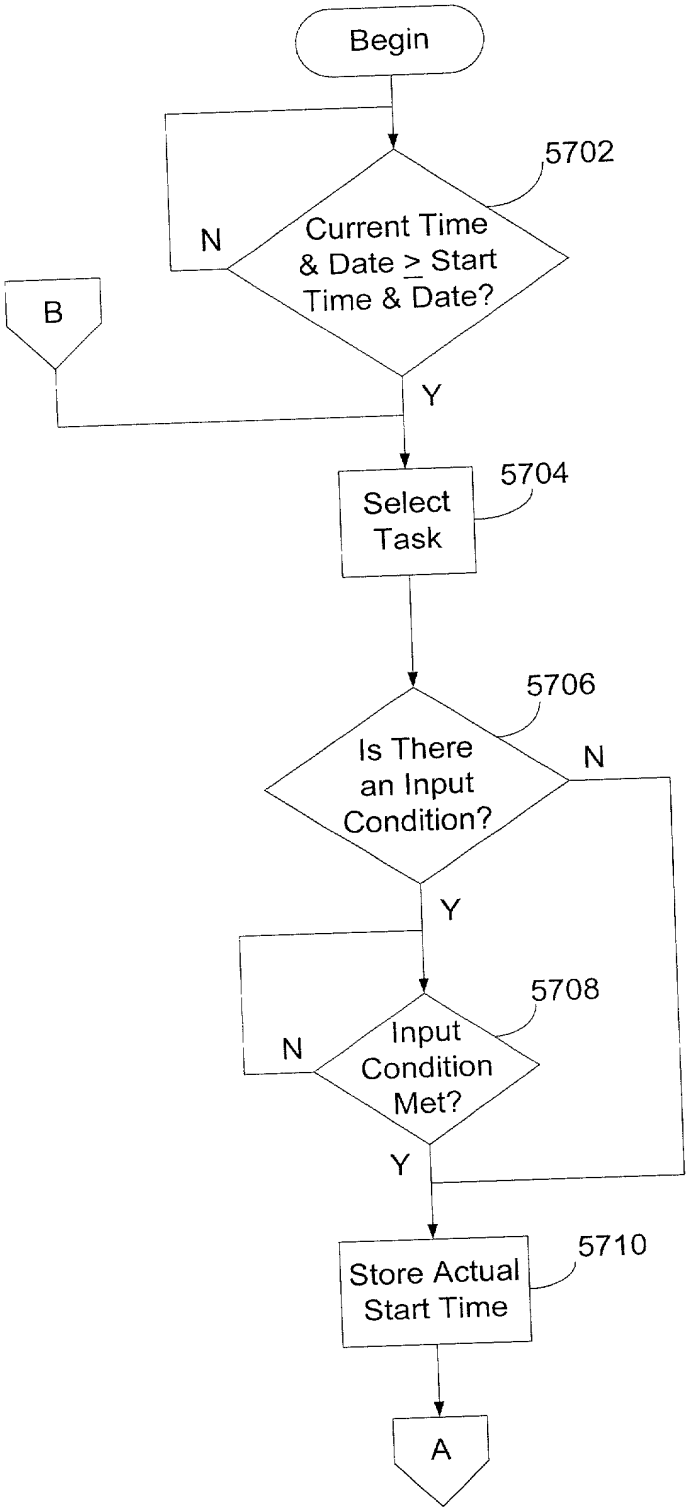

Begin
5702
Current Time & Date ≥ Start Time & Date?
N
Y
B
5704
Select Task
5706
Is There an Input Condition?
N
Y
5708
Input Condition Met?
N
Y
5710
Store Actual Start Time
A

FIG. 57B

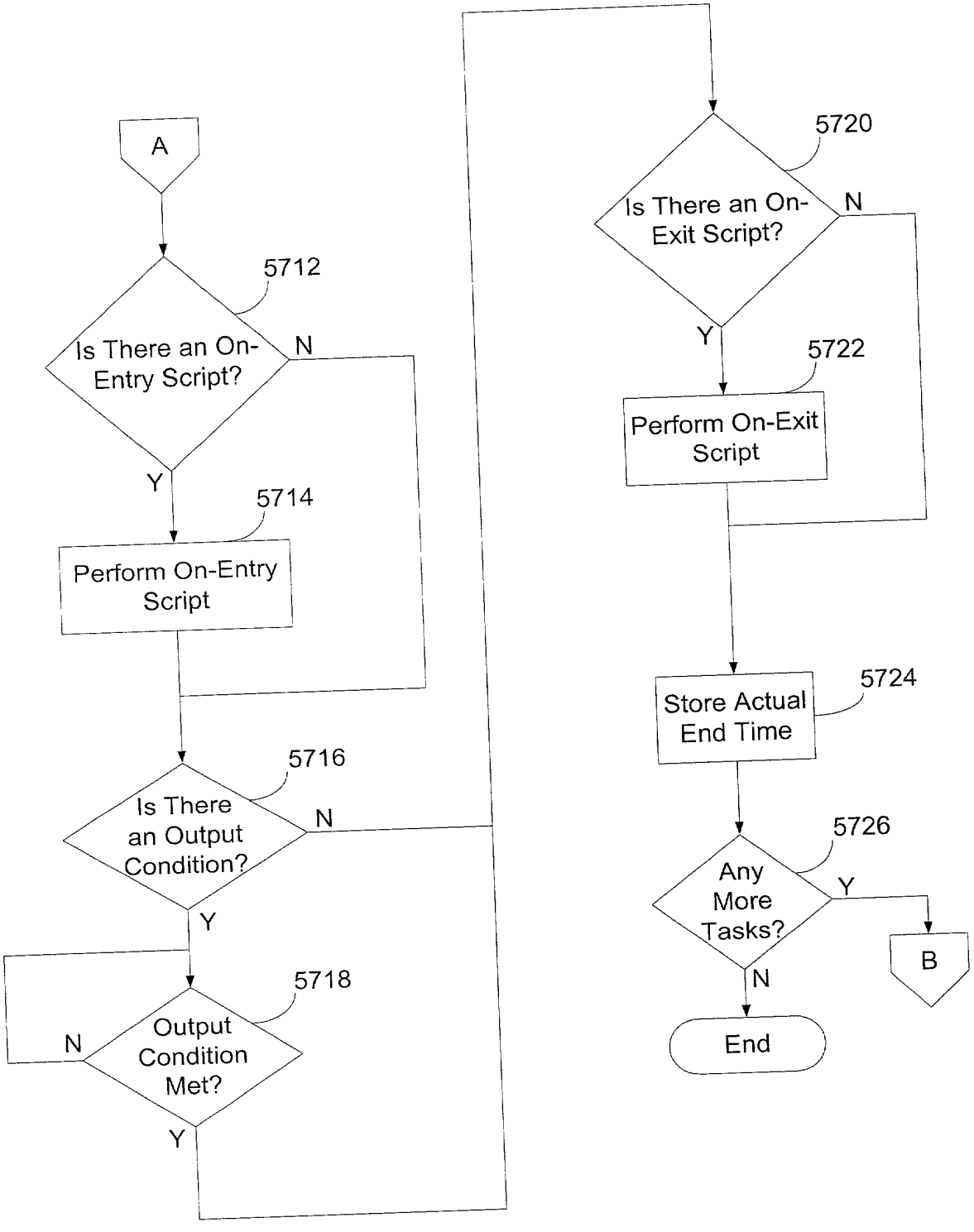

A
5712
Is There an On-Entry Script?
N
Y
5714
Perform On-Entry Script
5716
Is There an Output Condition?
N
Y
5718
Output Condition Met?
N
Y
5720
Is There an On-Exit Script?
N
Y
5722
Perform On-Exit Script
5724
Store Actual End Time
5726
Any More Tasks?
Y
N
B
End

FIG. 58

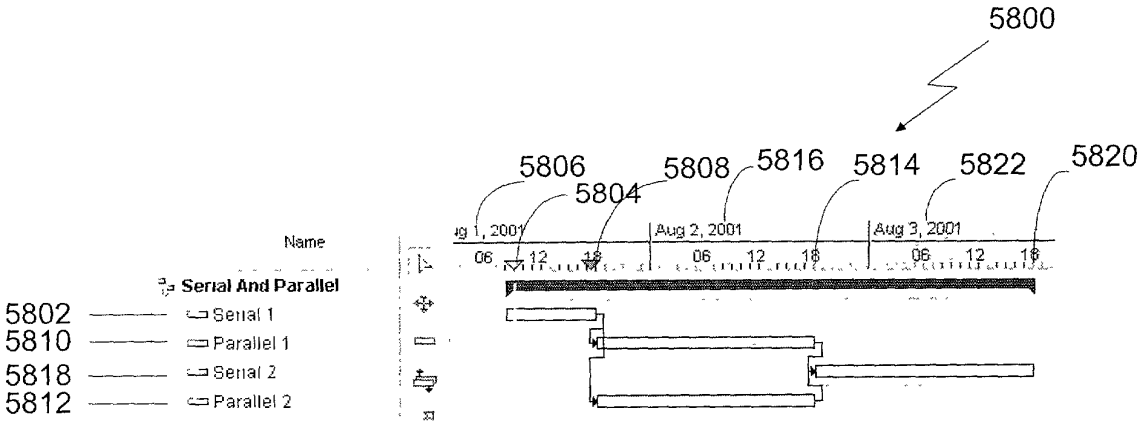

5800
5806
5808
5816
5814
5822
5820
5804
Name
Serial And Parallel
5802
Serial 1
5810
Parallel 1
5818
Serial 2
5812
Parallel 2
Aug 2, 2001
Aug 3, 2001
06
12
18

FIG. 59

5900

```
<?xml version="1.0" encoding="UTF-8" ?>
- <A:plan name="Serial_And_Parallel" userid="JK" xmlns:A="workflow">
  - <A:description>
    - <![CDATA[
    No Description
    ]]>
  </A:description>
  - <A:task activityID="10" caption="Serial 1"
      link="Sample_Project_Plans/Serial_And_Parallel/Task_2.xml" name="Task_2"
      owner="Worker"
      processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
      type="general" userid="JK">
    <A:start>2001 8 1 8</A:start>
    <A:finish>2001 8 1 18</A:finish>
    <A:supertask name="Task_1" />
    <A:user>JK</A:user>
    <A:successor name="Task_3" />
    <A:successor name="Task_4" />
  </A:task>
  - <A:task activityID="1523" caption="Parallel 1"
      link="Sample_Project_Plans/Serial_And_Parallel/Task_3.xml" name="Task_3"
      owner="Worker"
      processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
      type="general" userid="JK">
    <A:start>2001 8 1 18</A:start>
    <A:finish>2001 8 2 18</A:finish>
    <A:supertask name="Task_1" />
    <A:user>JK</A:user>
    <A:predecessor name="Task_2" />
    <A:successor name="Task_5" />
  </A:task>
  - <A:task activityID="1524" caption="Parallel 2"
      link="Sample_Project_Plans/Serial_And_Parallel/Task_4.xml" name="Task_4"
      owner="Worker"
      processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
      type="general" userid="JK">
    <A:start>2001 8 1 18</A:start>
    <A:finish>2001 8 2 18</A:finish>
    <A:supertask name="Task_1" />
    <A:user>JK</A:user>
    <A:predecessor name="Task_2" />
    <A:successor name="Task_5" />
  </A:task>
  - <A:task activityID="1526" caption="Serial 2"
      link="Sample_Project_Plans/Serial_And_Parallel/Task_5.xml" name="Task_5"
      owner="Worker"
      processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
      type="general" userid="JK">
    <A:start>2001 8 2 18</A:start>
    <A:finish>2001 8 3 18</A:finish>
    <A:supertask name="Task_1" />
    <A:user>JK</A:user>
    <A:predecessor name="Task_3" />
    <A:predecessor name="Task_4" />
  </A:task>
  - <A:task activityID="NONE" caption="Serial And Parallel"
      link="Sample_Project_Plans/Serial_And_Parallel/Task_1.xml" name="Task_1"
      processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
      type="general" userid="JK">
    <A:start>2001 8 1 8</A:start>
    <A:finish>2001 8 3 18</A:finish>
    <A:user>JK</A:user>
    <A:subtask name="Task_2" />
```

FIG. 60

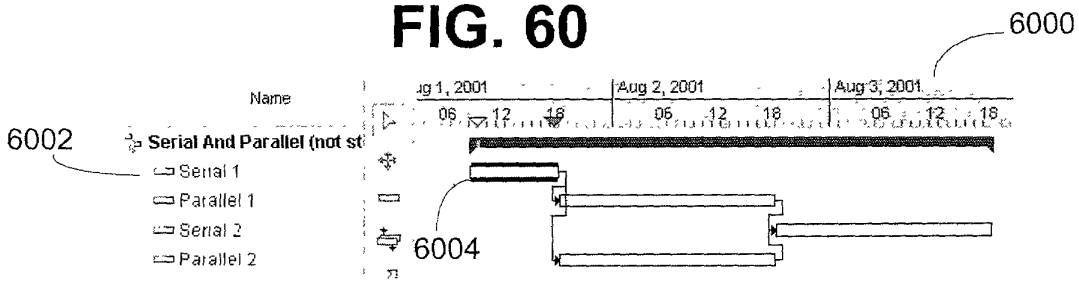


FIG. 61

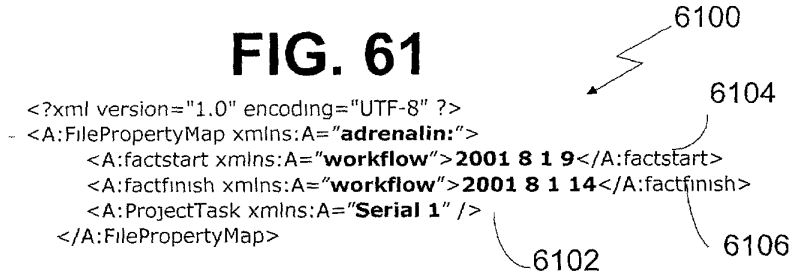


FIG. 62

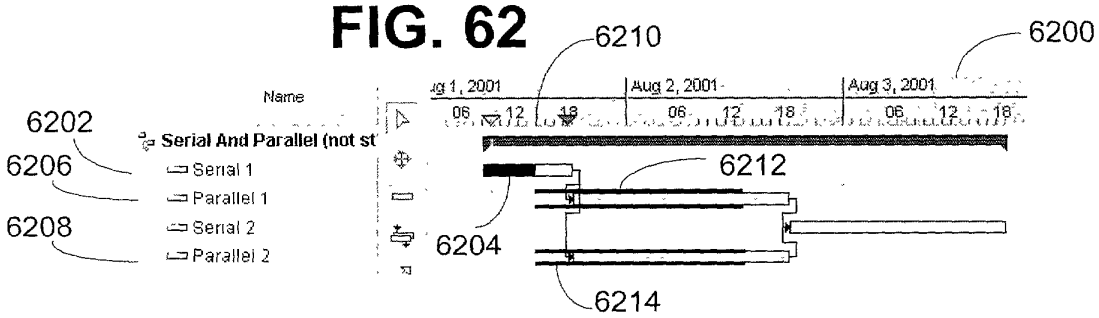


FIG. 63

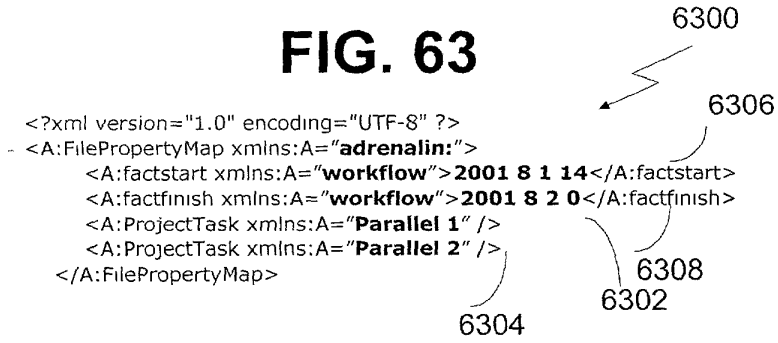


FIG. 64

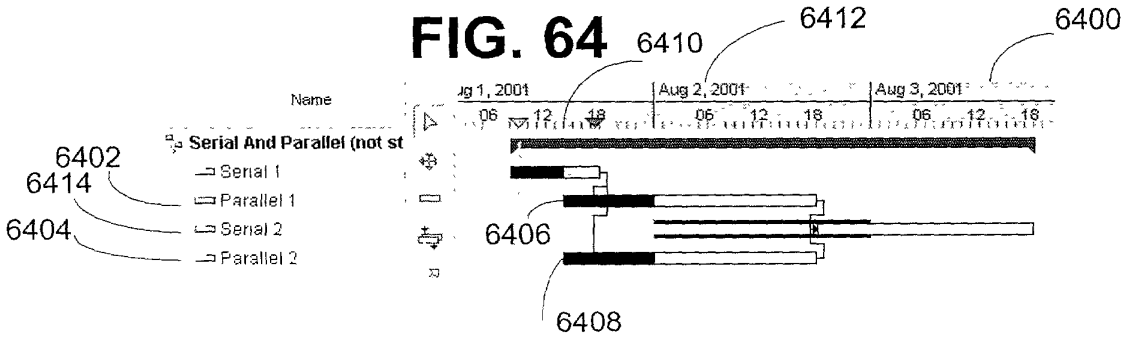


FIG. 65

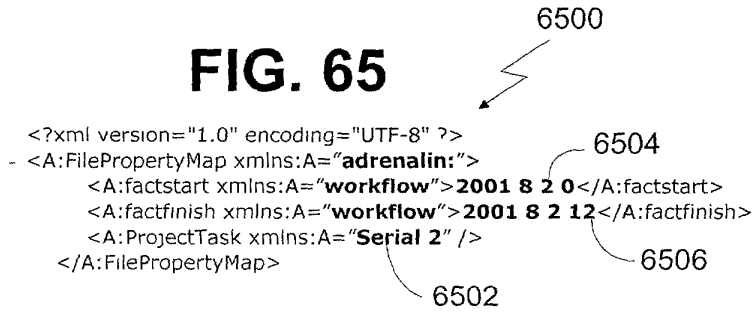

6500
<?xml version="1.0" encoding="UTF-8" ?>
<A:FilePropertyMap xmlns:A="adrenalin:">
<A:factstart xmlns:A="workflow">2001 8 2 0</A:factstart>
<A:factfinish xmlns:A="workflow">2001 8 2 12</A:factfinish>
<A:ProjectTask xmlns:A="Serial 2" />
</A:FilePropertyMap>
6504
6506
6502

FIG. 66

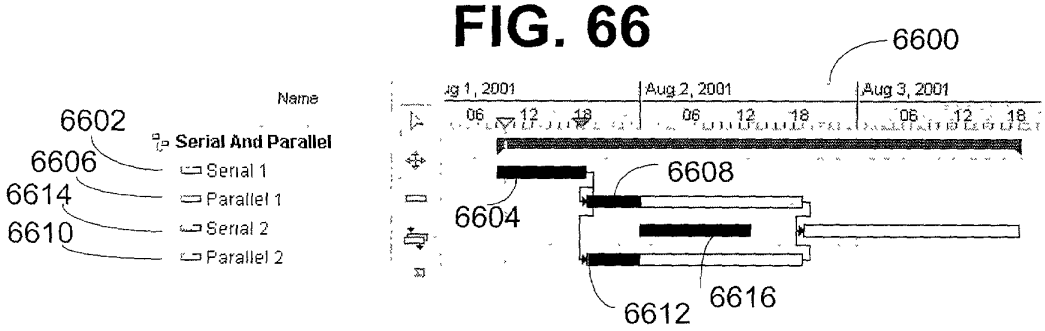
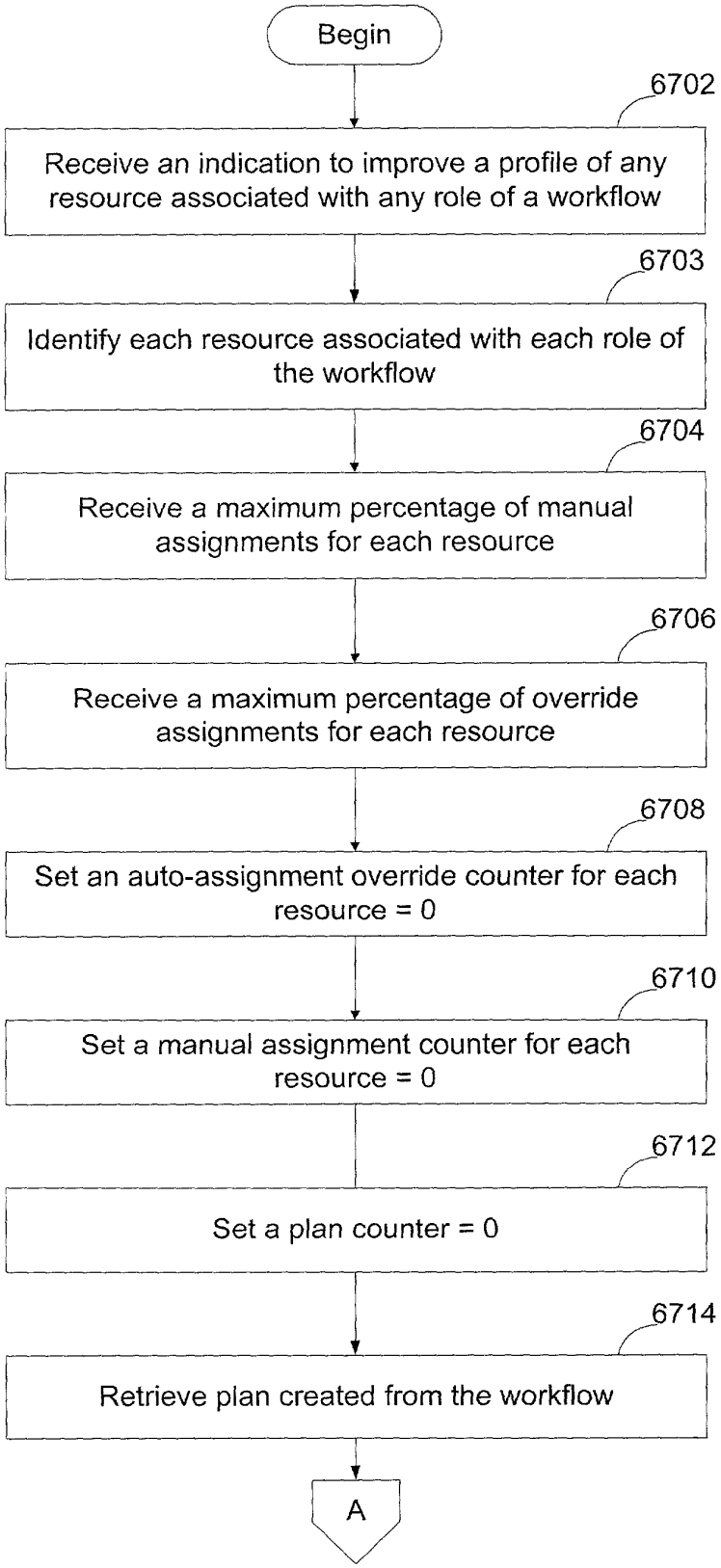

6600
Name
6602
Serial And Parallel
6606
Serial 1
6614
Parallel 1
6610
Serial 2
Parallel 2
Aug 1, 2001
Aug 2, 2001
Aug 3, 2001
06
12
18
6604
6608
6612
6616

FIG. 67A


Begin
6702
Receive an indication to improve a profile of any resource associated with any role of a workflow
6703
Identify each resource associated with each role of the workflow
6704
Receive a maximum percentage of manual assignments for each resource
6706
Receive a maximum percentage of override assignments for each resource
6708
Set an auto-assignment override counter for each resource = 0
6710
Set a manual assignment counter for each resource = 0
6712
Set a plan counter = 0
6714
Retrieve plan created from the workflow
A

Attached Exhibit

FIG. 67B

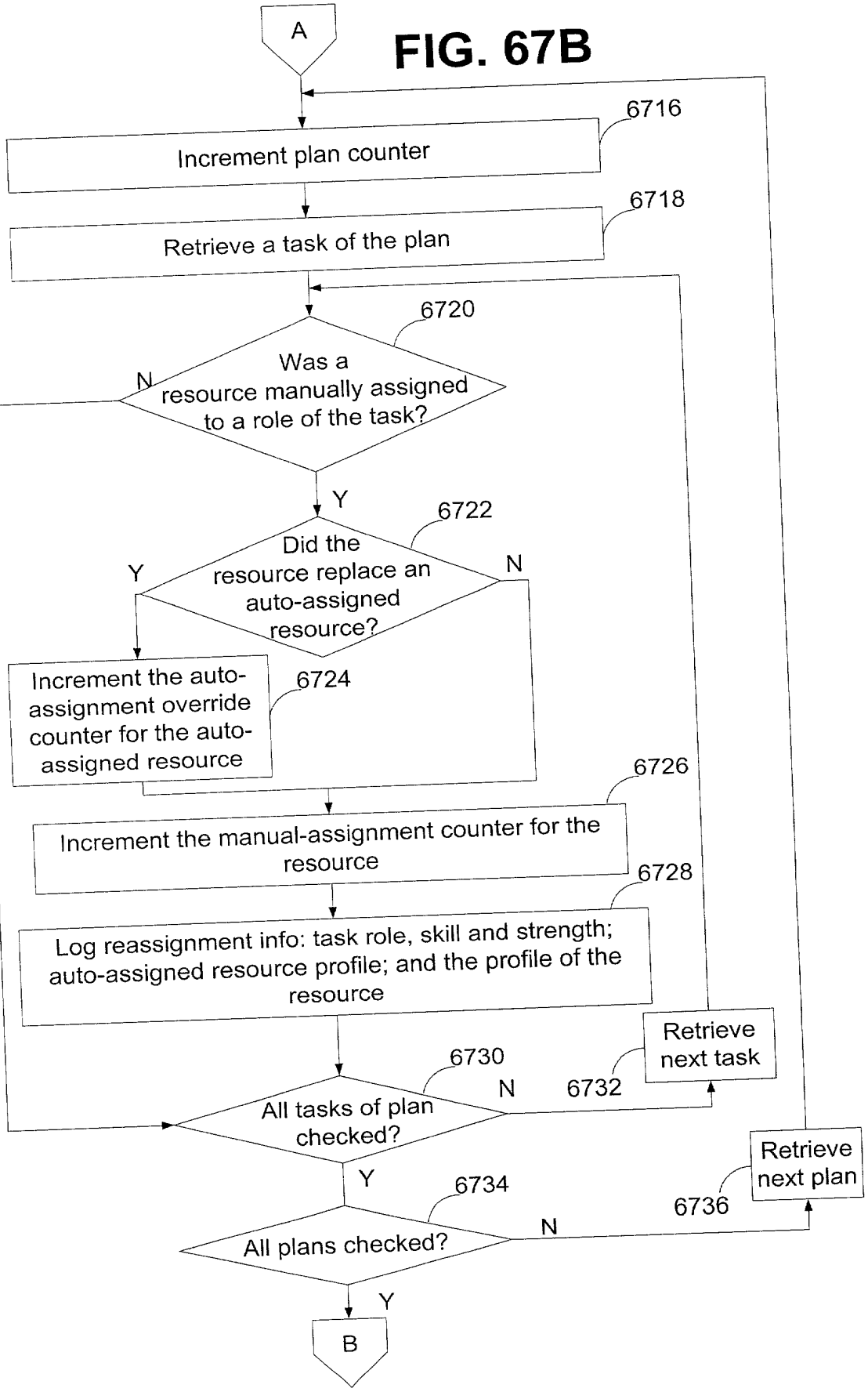


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FIG. 67C

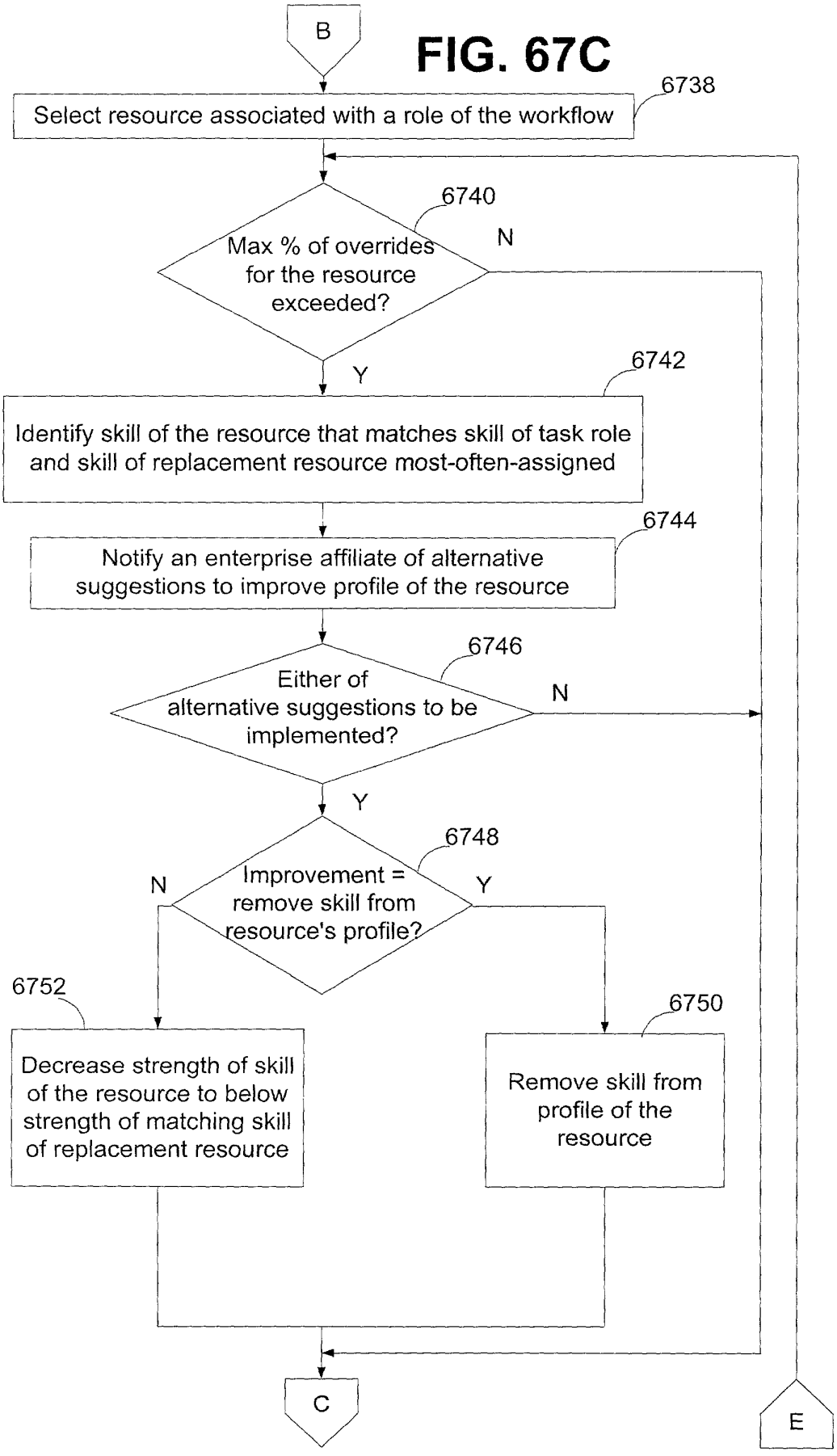


FIG. 67D

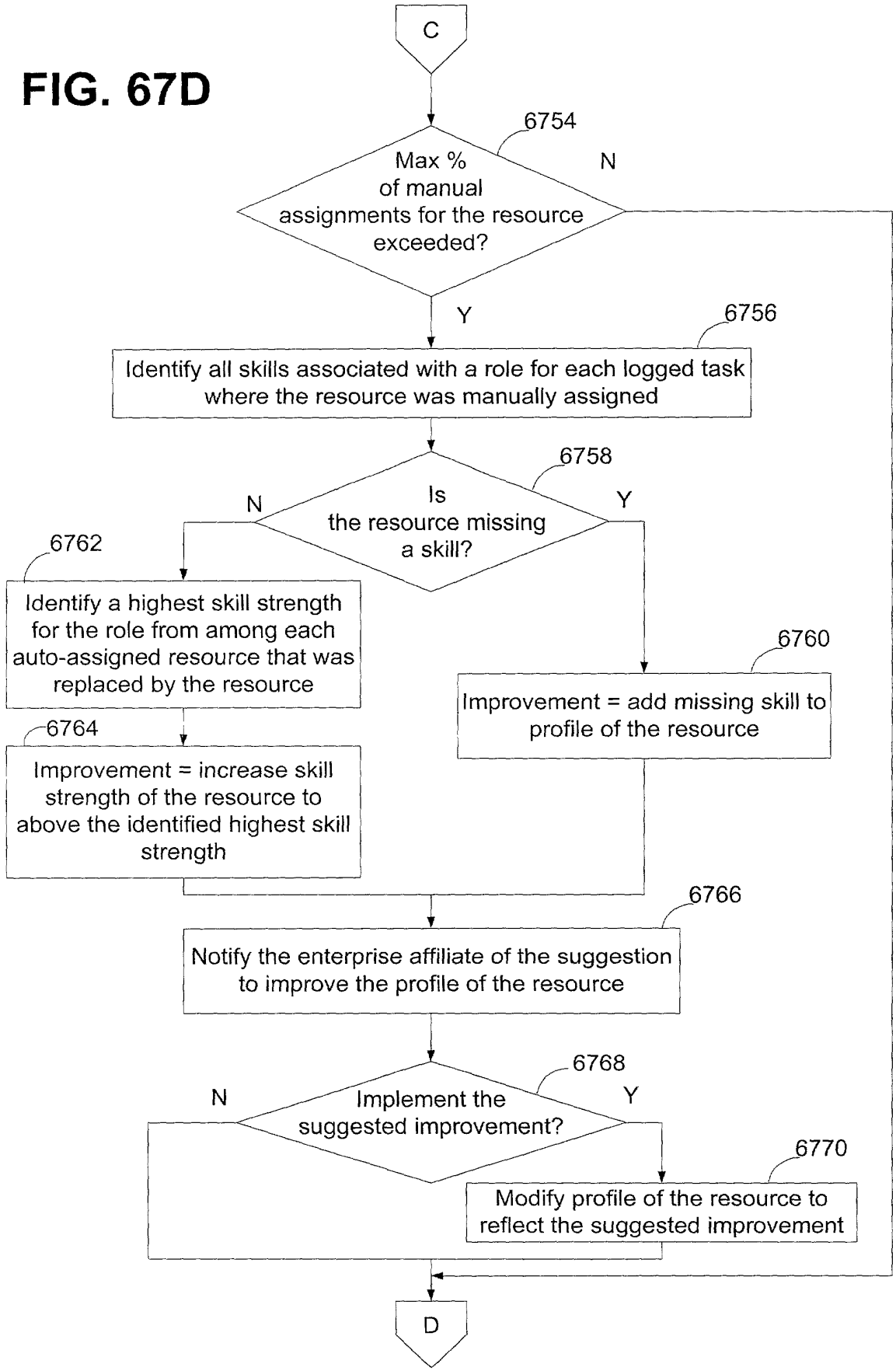

C
6754
Max % of manual assignments for the resource exceeded?
N
Y
6756
Identify all skills associated with a role for each logged task where the resource was manually assigned
6758
Is the resource missing a skill?
N
Y
6762
Identify a highest skill strength for the role from among each auto-assigned resource that was replaced by the resource
6760
Improvement = add missing skill to profile of the resource
6764
Improvement = increase skill strength of the resource to above the identified highest skill strength
6766
Notify the enterprise affiliate of the suggestion to improve the profile of the resource
6768
Implement the suggested improvement?
N
Y
6770
Modify profile of the resource to reflect the suggested improvement
D

FIG. 67E

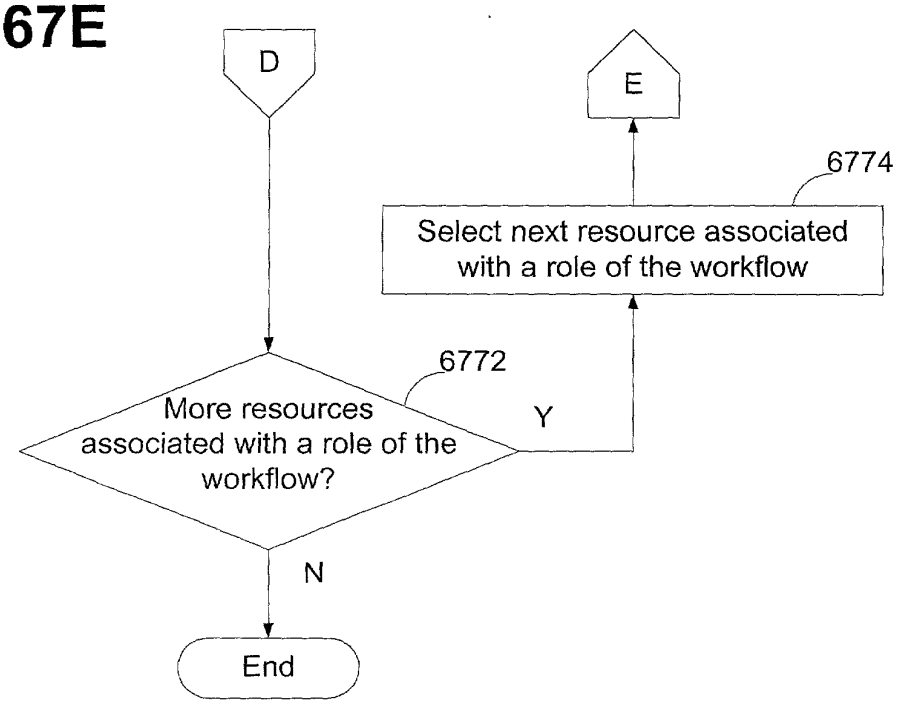

D
E
6774
Select next resource associated with a role of the workflow
6772
More resources associated with a role of the workflow?
Y
N
End

FIG. 68

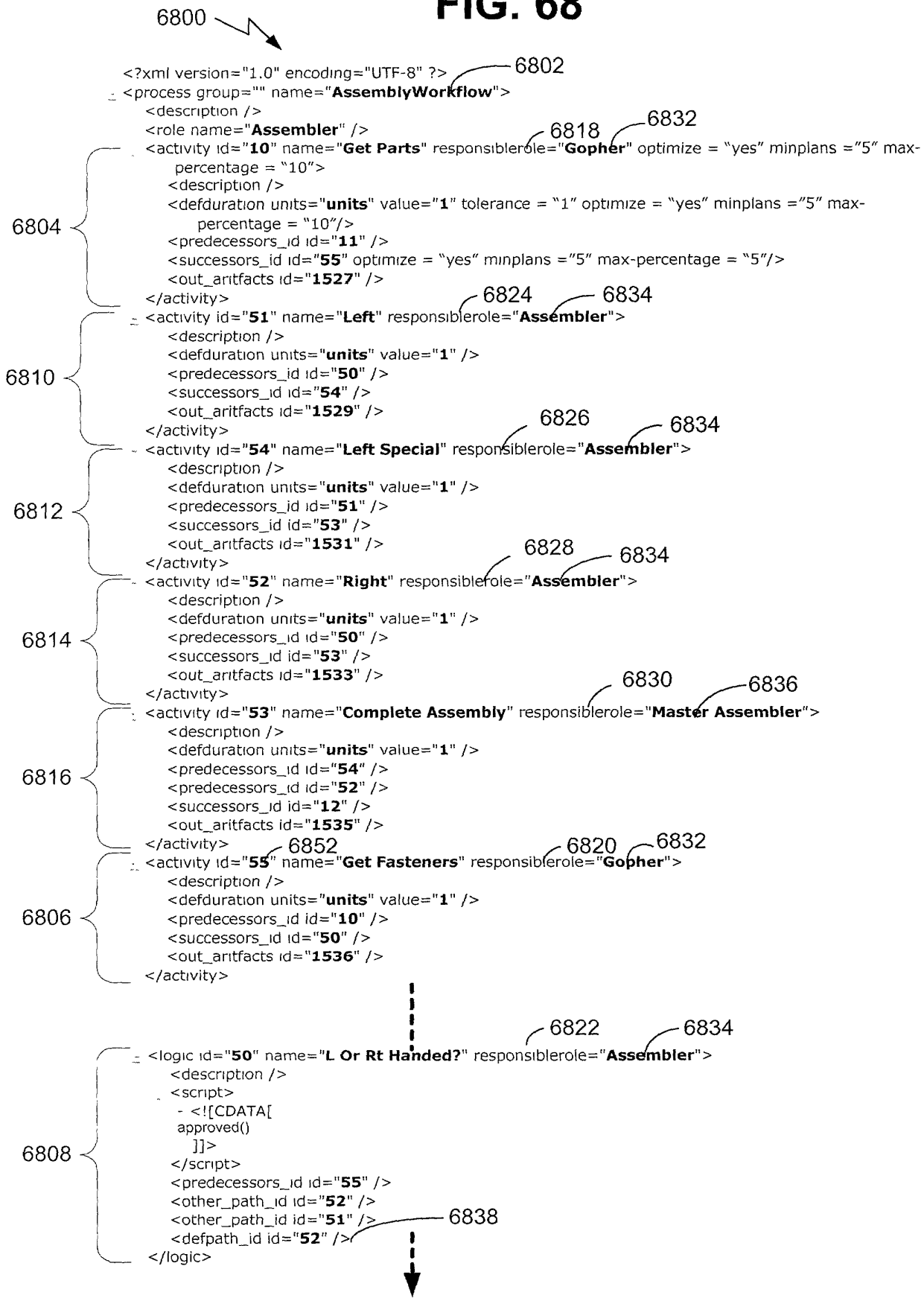

6800
<?xml version="1.0" encoding="UTF-8" ?>
6802
<process group="" name="AssemblyWorkflow">
<description />
<role name="Assembler" />
6818
6832
<activity id="10" name="Get Parts" responsiblerole="Gopher" optimize = "yes" minplans ="5" max-percentage = "10">
<description />
<defduration units="units" value="1" tolerance = "1" optimize = "yes" minplans ="5" max-percentage = "10"/>
<predecessors_id id="11" />
<successors_id id="55" optimize = "yes" minplans ="5" max-percentage = "5"/>
<out_aritfacts id="1527" />
6804
</activity>
6824
6834
<activity id="51" name="Left" responsiblerole="Assembler">
<description />
<defduration units="units" value="1" />
<predecessors_id id="50" />
<successors_id id="54" />
<out_aritfacts id="1529" />
6810
</activity>
6826
6834
<activity id="54" name="Left Special" responsiblerole="Assembler">
<description />
<defduration units="units" value="1" />
<predecessors_id id="51" />
<successors_id id="53" />
<out_aritfacts id="1531" />
6812
</activity>
6828
6834
<activity id="52" name="Right" responsiblerole="Assembler">
<description />
<defduration units="units" value="1" />
<predecessors_id id="50" />
<successors_id id="53" />
<out_aritfacts id="1533" />
6814
</activity>
6830
6836
<activity id="53" name="Complete Assembly" responsiblerole="Master Assembler">
<description />
<defduration units="units" value="1" />
<predecessors_id id="54" />
<predecessors_id id="52" />
<successors_id id="12" />
<out_aritfacts id="1535" />
6816
</activity>
6852
6820
6832
<activity id="55" name="Get Fasteners" responsiblerole="Gopher">
<description />
<defduration units="units" value="1" />
<predecessors_id id="10" />
<successors_id id="50" />
<out_aritfacts id="1536" />
6806
</activity>
6822
6834
<logic id="50" name="L Or Rt Handed?" responsiblerole="Assembler">
<description />
<script>
- <![CDATA[
approved()
]]>
</script>
<predecessors_id id="55" />
<other_path_id id="52" />
<other_path_id id="51" />
6838
<defpath_id id="52" />
6808
</logic>

FIG. 69

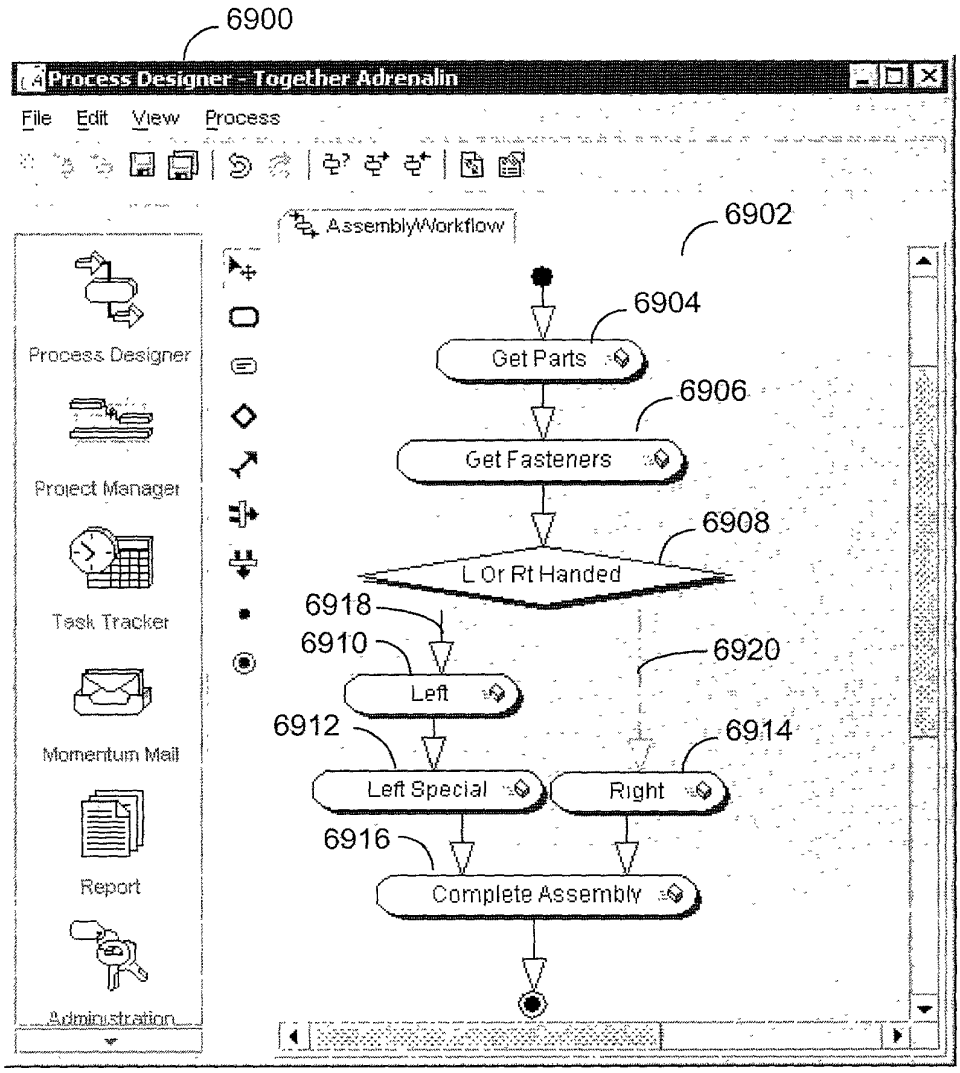

6900
Process Designer - Together Adrenalin
File Edit View Process
AssemblyWorkflow
6902
Process Designer
Project Manager
Task Tracker
Momentum Mail
Report
Administration
6904
Get Parts
6906
Get Fasteners
6908
L Or Rt Handed
6918
6910
Left
6920
6912
Left Special
Right
6914
6916
Complete Assembly

FIG. 70

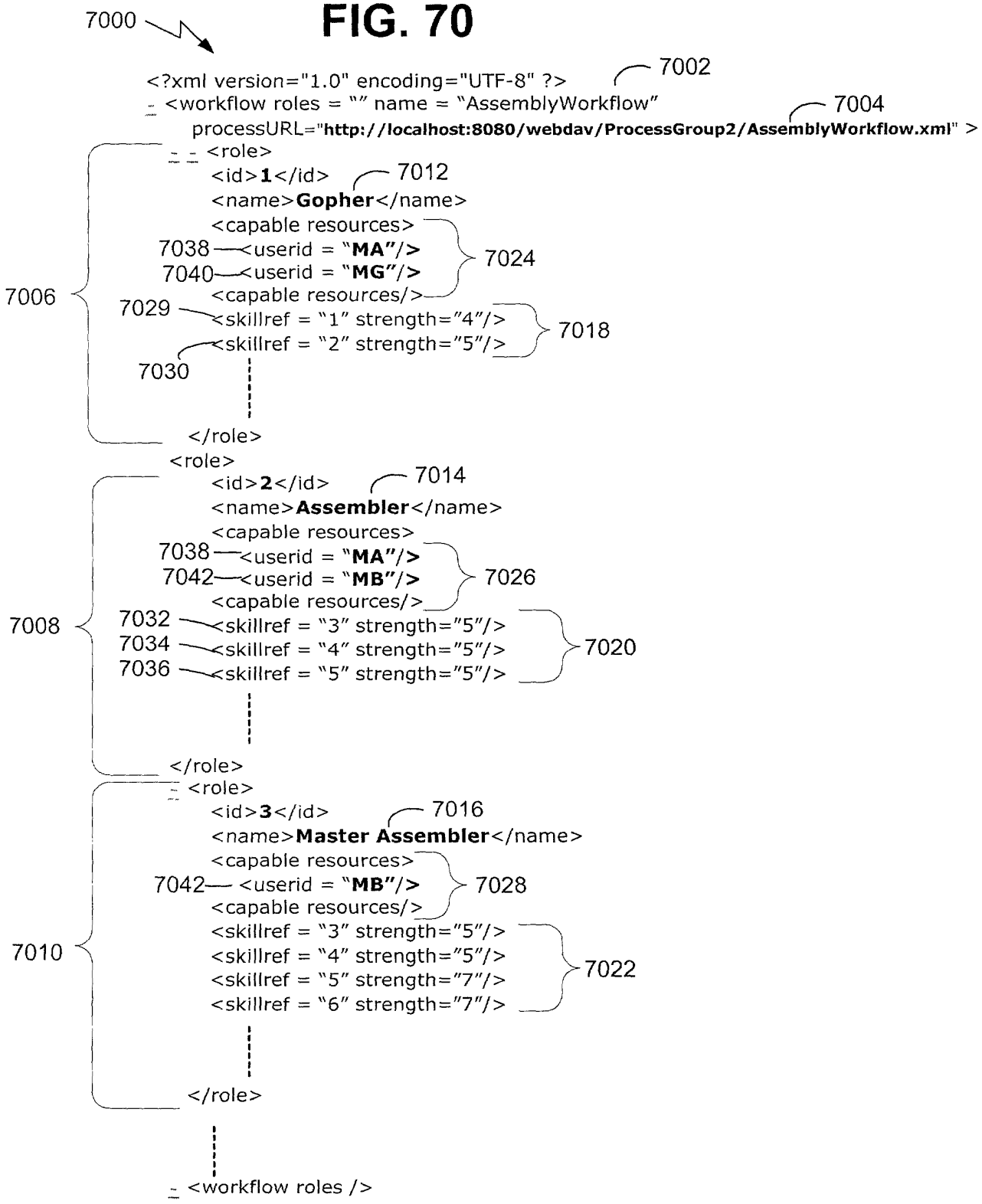

7000
<?xml version="1.0" encoding="UTF-8" ?>
7002
<workflow roles = "" name = "AssemblyWorkflow"
7004
processURL="http://localhost:8080/webdav/ProcessGroup2/AssemblyWorkflow.xml" >
<role>
<id>1</id>
7012
<name>Gopher</name>
<capable resources>
7038 <userid = "MA"/>
7040 <userid = "MG"/>
7024
<capable resources/>
7006
7029 <skillref = "1" strength="4"/>
<skillref = "2" strength="5"/>
7018
7030
</role>
<role>
<id>2</id>
7014
<name>Assembler</name>
<capable resources>
7038 <userid = "MA"/>
7042 <userid = "MB"/>
7026
<capable resources/>
7008
7032 <skillref = "3" strength="5"/>
7034 <skillref = "4" strength="5"/>
7036 <skillref = "5" strength="5"/>
7020
</role>
<role>
<id>3</id>
7016
<name>Master Assembler</name>
<capable resources>
7042 <userid = "MB"/>
7028
<capable resources/>
7010
<skillref = "3" strength="5"/>
<skillref = "4" strength="5"/>
<skillref = "5" strength="7"/>
<skillref = "6" strength="7"/>
7022
</role>
<workflow roles />

FIG. 71

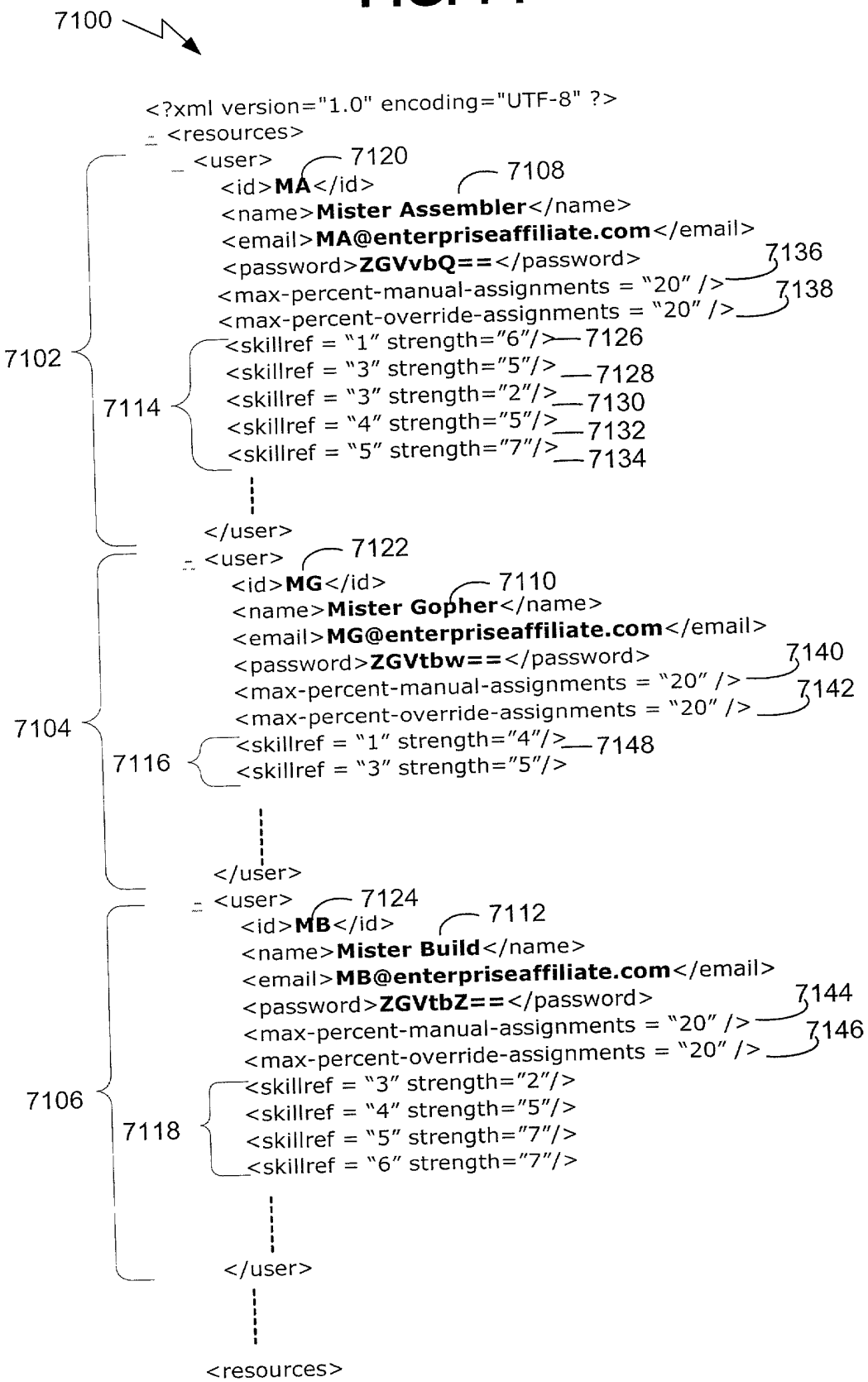

7100
<?xml version="1.0" encoding="UTF-8" ?>
<resources>
<user>
7120
<id>MA</id>
7108
<name>Mister Assembler</name>
<email>MA@enterpriseaffiliate.com</email>
<password>ZGVvbQ==</password>
7136
<max-percent-manual-assignments = "20" />
7138
<max-percent-override-assignments = "20" />
7102
<skillref = "1" strength="6"/>
7126
<skillref = "3" strength="5"/>
7128
7114
<skillref = "3" strength="2"/>
7130
<skillref = "4" strength="5"/>
7132
<skillref = "5" strength="7"/>
7134
</user>
<user>
7122
<id>MG</id>
7110
<name>Mister Gopher</name>
<email>MG@enterpriseaffiliate.com</email>
<password>ZGVtbw==</password>
7140
<max-percent-manual-assignments = "20" />
7142
<max-percent-override-assignments = "20" />
7104
<skillref = "1" strength="4"/>
7148
7116
<skillref = "3" strength="5"/>
</user>
<user>
7124
<id>MB</id>
7112
<name>Mister Build</name>
<email>MB@enterpriseaffiliate.com</email>
<password>ZGVtbZ==</password>
7144
<max-percent-manual-assignments = "20" />
7146
<max-percent-override-assignments = "20" />
7106
<skillref = "3" strength="2"/>
<skillref = "4" strength="5"/>
7118
<skillref = "5" strength="7"/>
<skillref = "6" strength="7"/>
</user>
<resources>

FIG. 72

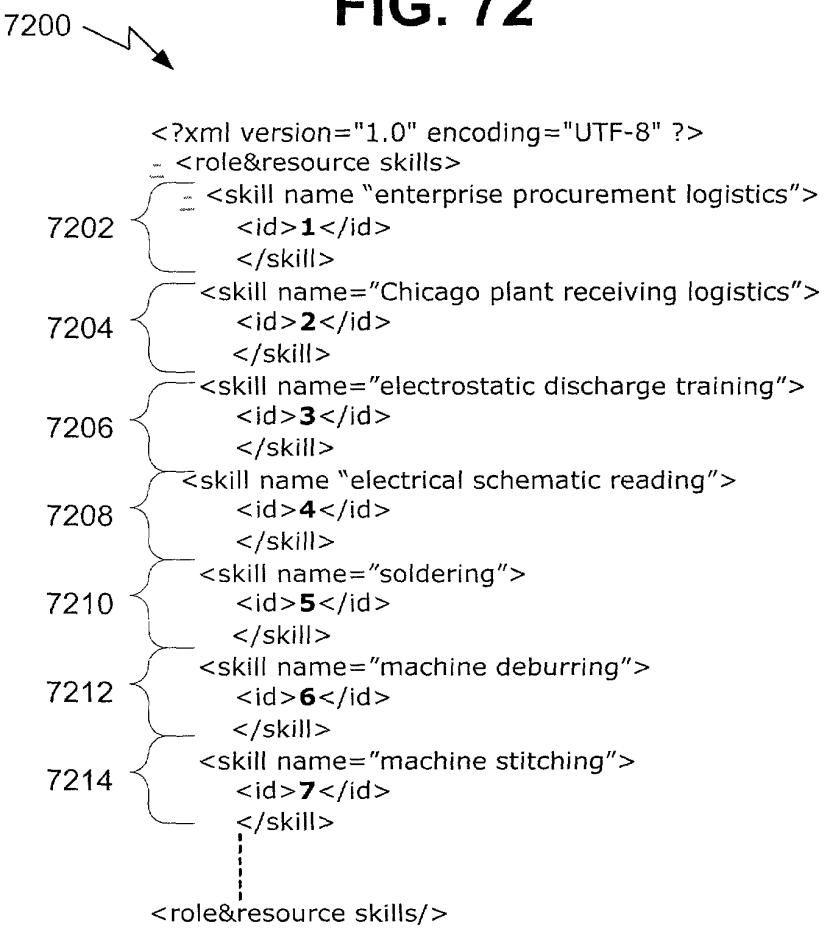

7200
<?xml version="1.0" encoding="UTF-8" ?>
<role&resource skills>
<skill name "enterprise procurement logistics">
7202
<id>1</id>
</skill>
<skill name="Chicago plant receiving logistics">
7204
<id>2</id>
</skill>
<skill name="electrostatic discharge training">
7206
<id>3</id>
</skill>
<skill name "electrical schematic reading">
7208
<id>4</id>
</skill>
<skill name="soldering">
7210
<id>5</id>
</skill>
<skill name="machine deburring">
7212
<id>6</id>
</skill>
<skill name="machine stitching">
7214
<id>7</id>
</skill>
<role&resource skills/>

FIG. 73A

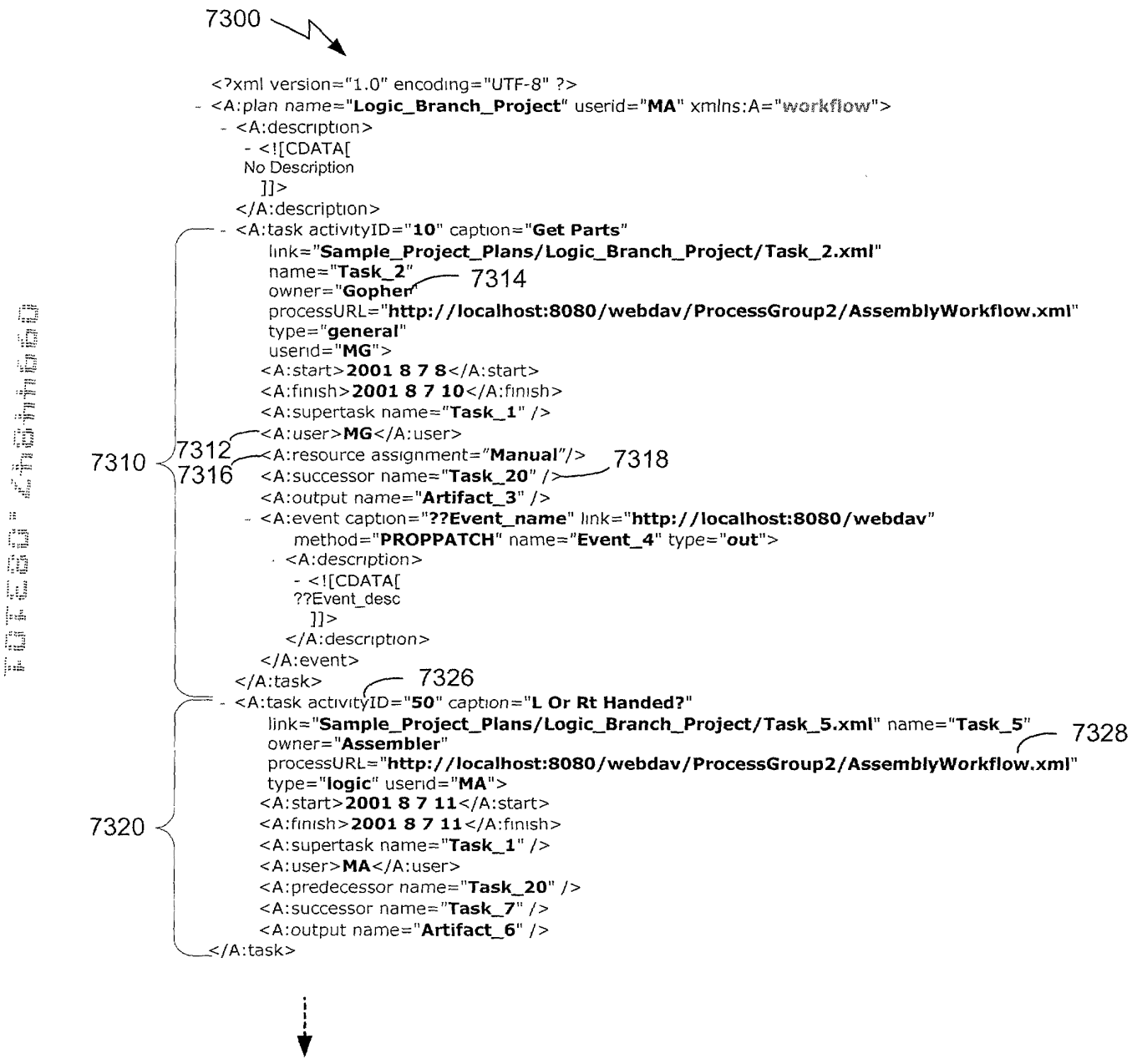

7300
<?xml version="1.0" encoding="UTF-8" ?>
- <A:plan name="Logic_Branch_Project" userid="MA" xmlns:A="workflow">
- <A:description>
- <![CDATA[
No Description
]]>
</A:description>
- <A:task activityID="10" caption="Get Parts"
link="Sample_Project_Plans/Logic_Branch_Project/Task_2.xml"
name="Task_2"
owner="Gopher"
7314
processURL="http://localhost:8080/webdav/ProcessGroup2/AssemblyWorkflow.xml"
type="general"
userid="MG">
<A:start>2001 8 7 8</A:start>
<A:finish>2001 8 7 10</A:finish>
<A:supertask name="Task_1" />
<A:user>MG</A:user>
7312
<A:resource assignment="Manual"/>
7318
7310
7316
<A:successor name="Task_20" />
<A:output name="Artifact_3" />
- <A:event caption="??Event_name" link="http://localhost:8080/webdav"
method="PROPPATCH" name="Event_4" type="out">
- <A:description>
- <![CDATA[
??Event_desc
]]>
</A:description>
</A:event>
</A:task>
7326
- <A:task activityID="50" caption="L Or Rt Handed?"
link="Sample_Project_Plans/Logic_Branch_Project/Task_5.xml" name="Task_5"
7328
owner="Assembler"
processURL="http://localhost:8080/webdav/ProcessGroup2/AssemblyWorkflow.xml"
type="logic" userid="MA">
<A:start>2001 8 7 11</A:start>
7320
<A:finish>2001 8 7 11</A:finish>
<A:supertask name="Task_1" />
<A:user>MA</A:user>
<A:predecessor name="Task_20" />
<A:successor name="Task_7" />
<A:output name="Artifact_6" />
</A:task>

FIG. 73B

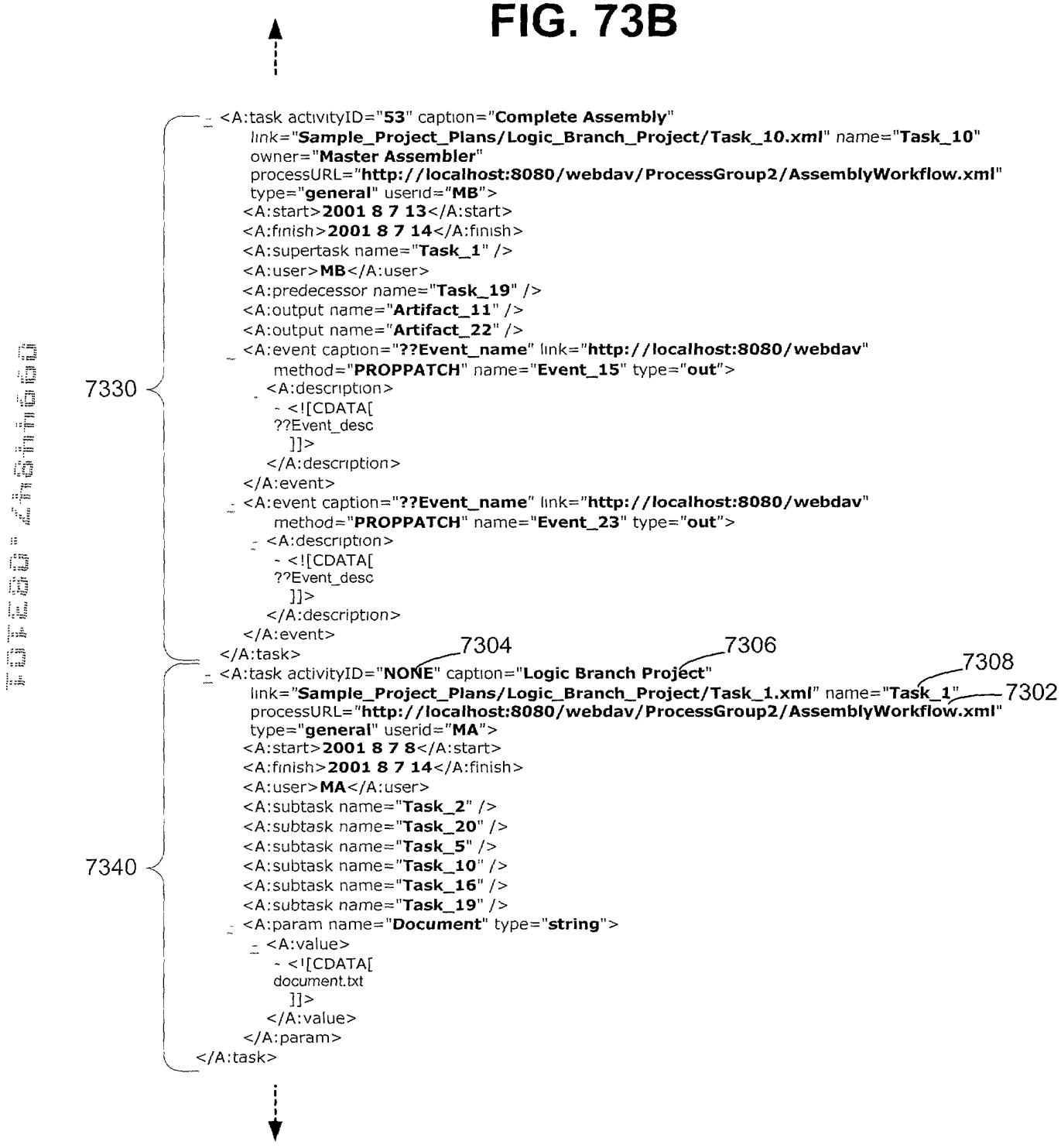
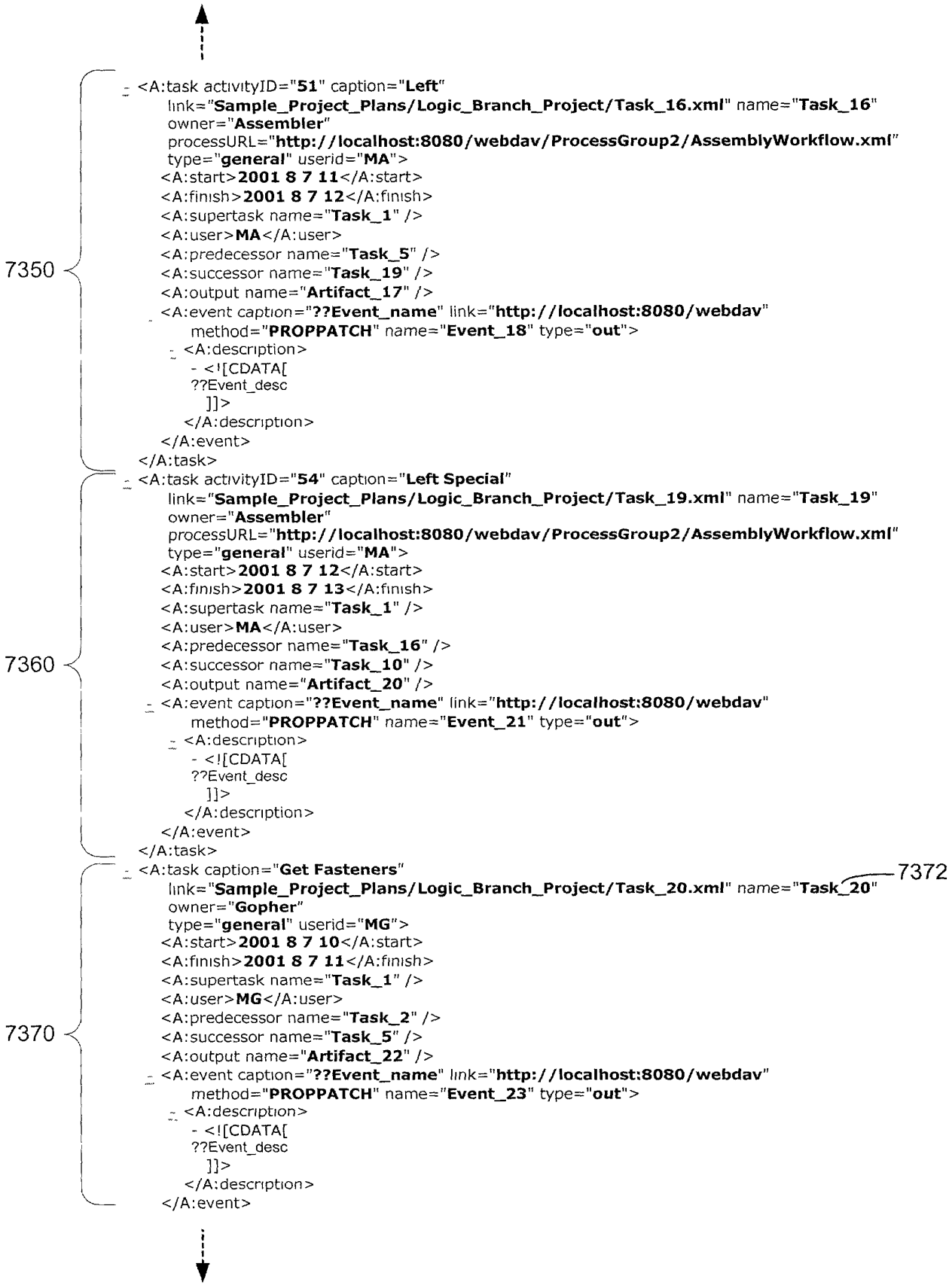
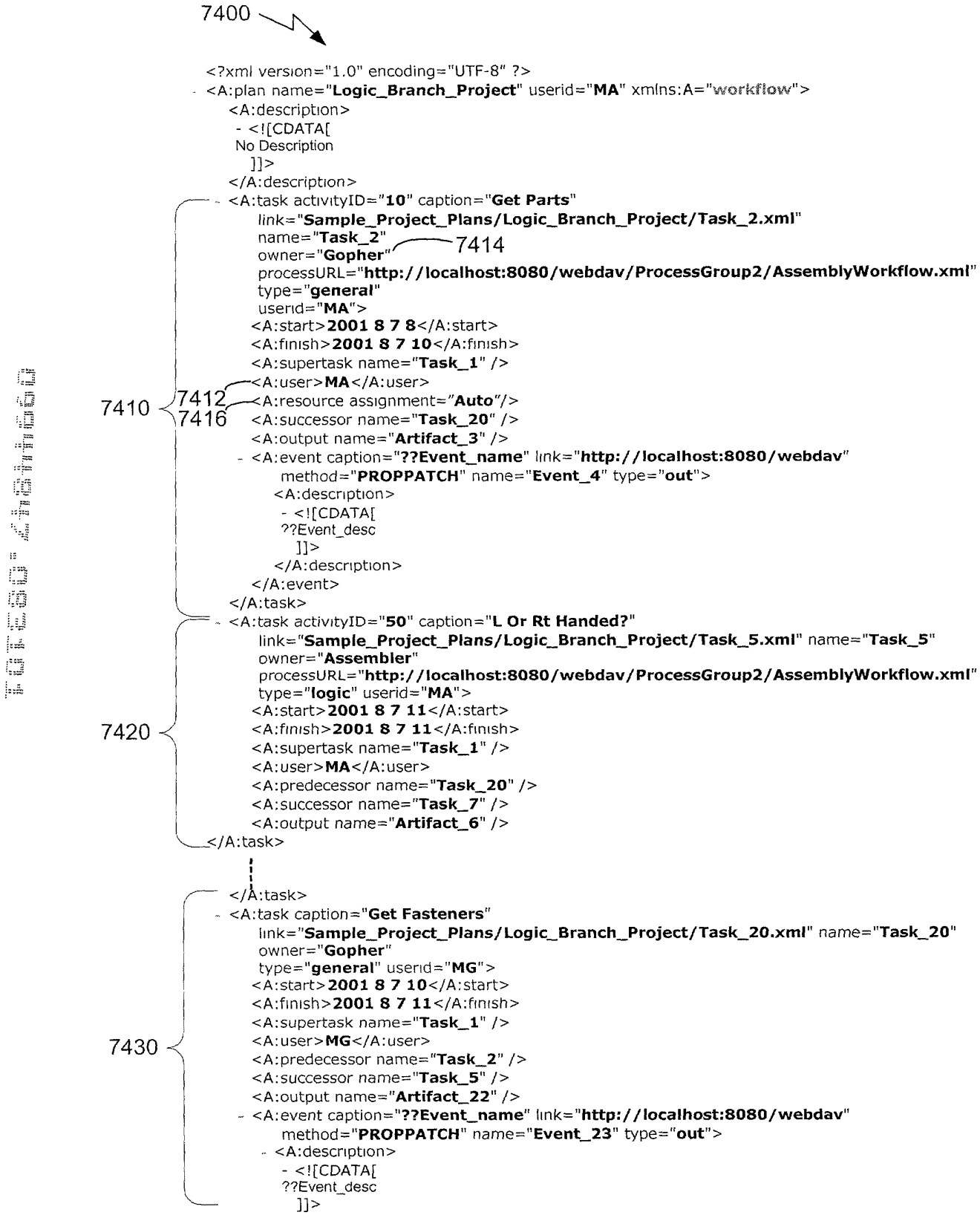

7330
7340
7304
7306
7308
7302
<A:task activityID="53" caption="Complete Assembly"
link="Sample_Project_Plans/Logic_Branch_Project/Task_10.xml" name="Task_10"
owner="Master Assembler"
processURL="http://localhost:8080/webdav/ProcessGroup2/AssemblyWorkflow.xml"
type="general" userid="MB">
<A:start>2001 8 7 13</A:start>
<A:finish>2001 8 7 14</A:finish>
<A:supertask name="Task_1" />
<A:user>MB</A:user>
<A:predecessor name="Task_19" />
<A:output name="Artifact_11" />
<A:output name="Artifact_22" />
<A:event caption="??Event_name" link="http://localhost:8080/webdav"
method="PROPPATCH" name="Event_15" type="out">
<A:description>
<![CDATA[
??Event_desc
]]>
</A:description>
</A:event>
<A:event caption="??Event_name" link="http://localhost:8080/webdav"
method="PROPPATCH" name="Event_23" type="out">
<A:description>
<![CDATA[
??Event_desc
]]>
</A:description>
</A:event>
</A:task>
<A:task activityID="NONE" caption="Logic Branch Project"
link="Sample_Project_Plans/Logic_Branch_Project/Task_1.xml" name="Task_1"
processURL="http://localhost:8080/webdav/ProcessGroup2/AssemblyWorkflow.xml"
type="general" userid="MA">
<A:start>2001 8 7 8</A:start>
<A:finish>2001 8 7 14</A:finish>
<A:user>MA</A:user>
<A:subtask name="Task_2" />
<A:subtask name="Task_20" />
<A:subtask name="Task_5" />
<A:subtask name="Task_10" />
<A:subtask name="Task_16" />
<A:subtask name="Task_19" />
<A:param name="Document" type="string">
<A:value>
<![CDATA[
document.txt
]]>
</A:value>
</A:param>
</A:task>

FIG. 73C




```
- <A:task activityID="51" caption="Left"
    link="Sample_Project_Plans/Logic_Branch_Project/Task_16.xml" name="Task_16"
    owner="Assembler"
    processURL="http://localhost:8080/webdav/ProcessGroup2/AssemblyWorkflow.xml"
    type="general" userid="MA">
   <A:start>2001 8 7 11</A:start>
   <A:finish>2001 8 7 12</A:finish>
   <A:supertask name="Task_1" />
   <A:user>MA</A:user>
   <A:predecessor name="Task_5" />
   <A:successor name="Task_19" />
   <A:output name="Artifact_17" />
  - <A:event caption="??Event_name" link="http://localhost:8080/webdav"
      method="PROPPATCH" name="Event_18" type="out">
    - <A:description>
      - <![CDATA[
      ??Event_desc
        ]]>
     </A:description>
   </A:event>
 </A:task>
- <A:task activityID="54" caption="Left Special"
    link="Sample_Project_Plans/Logic_Branch_Project/Task_19.xml" name="Task_19"
    owner="Assembler"
    processURL="http://localhost:8080/webdav/ProcessGroup2/AssemblyWorkflow.xml"
    type="general" userid="MA">
   <A:start>2001 8 7 12</A:start>
   <A:finish>2001 8 7 13</A:finish>
   <A:supertask name="Task_1" />
   <A:user>MA</A:user>
   <A:predecessor name="Task_16" />
   <A:successor name="Task_10" />
   <A:output name="Artifact_20" />
  - <A:event caption="??Event_name" link="http://localhost:8080/webdav"
      method="PROPPATCH" name="Event_21" type="out">
    - <A:description>
      - <![CDATA[
      ??Event_desc
        ]]>
     </A:description>
   </A:event>
 </A:task>
- <A:task caption="Get Fasteners"
    link="Sample_Project_Plans/Logic_Branch_Project/Task_20.xml" name="Task_20"
    owner="Gopher"
    type="general" userid="MG">
   <A:start>2001 8 7 10</A:start>
   <A:finish>2001 8 7 11</A:finish>
   <A:supertask name="Task_1" />
   <A:user>MG</A:user>
   <A:predecessor name="Task_2" />
   <A:successor name="Task_5" />
   <A:output name="Artifact_22" />
  - <A:event caption="??Event_name" link="http://localhost:8080/webdav"
      method="PROPPATCH" name="Event_23" type="out">
    - <A:description>
      - <![CDATA[
      ??Event_desc
        ]]>
     </A:description>
   </A:event>
```

FIG. 74


7400
<?xml version="1.0" encoding="UTF-8" ?>
<A:plan name="Logic_Branch_Project" userid="MA" xmlns:A="workflow">
<A:description>
<![CDATA[
No Description
]]>
</A:description>
<A:task activityID="10" caption="Get Parts"
link="Sample_Project_Plans/Logic_Branch_Project/Task_2.xml"
name="Task_2"
owner="Gopher"
7414
processURL="http://localhost:8080/webdav/ProcessGroup2/AssemblyWorkflow.xml"
type="general"
userid="MA">
<A:start>2001 8 7 8</A:start>
<A:finish>2001 8 7 10</A:finish>
<A:supertask name="Task_1" />
<A:user>MA</A:user>
7412
<A:resource assignment="Auto"/>
7410
7416
<A:successor name="Task_20" />
<A:output name="Artifact_3" />
<A:event caption="??Event_name" link="http://localhost:8080/webdav"
method="PROPPATCH" name="Event_4" type="out">
<A:description>
<![CDATA[
??Event_desc
]]>
</A:description>
</A:event>
</A:task>
<A:task activityID="50" caption="L Or Rt Handed?"
link="Sample_Project_Plans/Logic_Branch_Project/Task_5.xml" name="Task_5"
owner="Assembler"
processURL="http://localhost:8080/webdav/ProcessGroup2/AssemblyWorkflow.xml"
type="logic" userid="MA">
<A:start>2001 8 7 11</A:start>
<A:finish>2001 8 7 11</A:finish>
7420
<A:supertask name="Task_1" />
<A:user>MA</A:user>
<A:predecessor name="Task_20" />
<A:successor name="Task_7" />
<A:output name="Artifact_6" />
</A:task>
</A:task>
<A:task caption="Get Fasteners"
link="Sample_Project_Plans/Logic_Branch_Project/Task_20.xml" name="Task_20"
owner="Gopher"
type="general" userid="MG">
<A:start>2001 8 7 10</A:start>
<A:finish>2001 8 7 11</A:finish>
<A:supertask name="Task_1" />
7430
<A:user>MG</A:user>
<A:predecessor name="Task_2" />
<A:successor name="Task_5" />
<A:output name="Artifact_22" />
<A:event caption="??Event_name" link="http://localhost:8080/webdav"
method="PROPPATCH" name="Event_23" type="out">
<A:description>
<![CDATA[
??Event_desc
]]>